648

THE FINANCIAL Analysts Journal

Published Every Other Month by THE NATIONAL FEDERATION OF FINANCIAL ANALYSTS SOCIETIES

VOLUME 16 : NUMBER 1 JANUARY-FEBRUARY 1960

The Business Boom of 1960 . . . . . LAWRENCE R. KAHN 7
Top Analyst Says Selectivity Is Keynote

Canada — A Reappraisal . . . . . JAMES H. SCHURMAN 11
'The Twentieth Century Belongs to Canada'

Broad Economics of Iron and Steel Industry . . . REUBEN E. SLESINGER 15
Stabilization Vital for Nation's Well-Being

Trend of the Military Market . . . . . DR. MURRAY L. WEIDENBAUM 21
Biggest All-Time Spenders: Army, Navy, Airforce

Bowling: A Billion Dollar Industry . . . . . B. E. BENSINGER 27
Brunswick-Balke's President Says Third Most Popular Sport

Alaska's Economic Outlook . . . . . IVAN BLOCH 31
America's Last Frontier Rich in Untapped Resources

The Case for an Unmanaged Investment Co. . . . EDWARD F. RENSHAW AND PAUL J. FELDSTEIN 43

Commodities: High Finance in Zinc . . . . . FREDERICK R. HOISINGTON 49

PACIFIC COAST INVESTMENT FORUM

Economy of the Stock Market, 1929 and Now . . . HAMILTON BOLTON 57

The Investment Climate—General Prospects . . DR. BERYL W. SPRINKLE 62

The Outlook for the Bond Market . . . . . RUSSELL A. KENT 64

Selecting Securities in a One-World Economy . . . . . JOHN P. CHASE 67

History of San Francisco Security Analysts . . . WILLIAM M. BENNETT 69

★ ★ ★

New York Analysts Open Own Spacious Club 9

First Helen Slade Sanders Scholarship Winner Builds Fund 12

Letters 73

Book Reviews (*Puts and Calls*) 75

IN OUR MARCH–APRIL ISSUE

A real growth situation: Japan—its expanding economy and investment possibilities, by Carl L. A. Beckers, St. Louis bank executive and Financial Analyst. Among other articles, two exclusive interviews with electronics executives.

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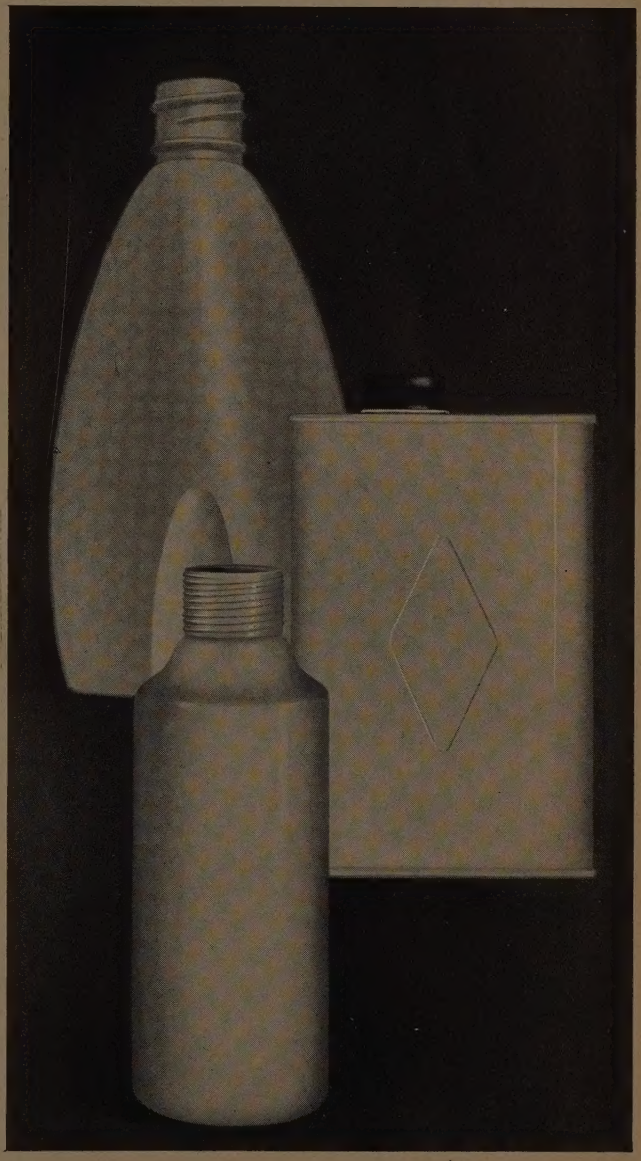
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Analysts Journal

Volume 16, Number 1
January-February 1960

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The Pacific Coast Investment Forum

On the occasion of its thirtieth anniversary, *The Security Analysts of San Francisco* paused in the day's occupation for a quick look backward.

And this quick look backward took them to 1929 when the Society was originally known as "Financial Statisticians of San Francisco." The now historical year of 1929 invokes several images, among them the most tragic stock market break in history, as well as—thinking of a brighter side—the "best" vintage year for European wines. And if asked to "analyze" these two diverse events, we might observe: financial spirits reached their lowest ebb, while bottle spirits held a renaissance. And it was certainly in the spirit of the latter that a small number of the West Coast's men of finance organized the San Francisco Society which is now 30 years of age.

This Society's historian, William M. Bennett, presents a most interesting account of the early beginnings (see page 69.) And what interests us most is his explanation of how those determined Analysts told corporation executives *exactly* what it was that interested them, and then *asked* pointed questions accordingly. The Analysts figured (correctly of course) that a stockholder had the inalienable right to certain corporate facts. But we can't help wondering how the corporate brass of *that* generation took this new and bold ultimatum of "tell us, or else. . . ."

Regardless, we like this pioneering spirit; and certainly it would be extremely interesting reading if some West Coast Analyst could remember examples of the corporate reaction then, and tell us about it, say, in a letter-to-the-editor.

But today, ah, how different. In many instances we have executives of the largest corporations (often board chairmen and presidents) pounding on our doors in a sincere effort to open their books, and, indeed, often their hearts, in a welcome spirit of frank cooperation. Our friends among corporation executives are legion; and the bonds of respect have proved, and are proving, mutually advantageous.

But, as we recall "those good old days," the almost universal corporate image might be likened to a canny clam. However, some of the more "enlightened" companies did issue an occasional statement about redecorating the lobby, or just possibly there would be an observation to the effect that the previous year had been highly successful—but of course no figures and/or charts and graphs backed up those observations.

In 1929, and the early thirties, financial public relations had progressed just one step from the legendary figure who, in an effort to alter his corporate image, distributed shiny dimes. Indeed we would like to hear about the early reaction of West Coast firms which were asked to put their corporate houses under the Financial Analysts' microscopes. The zooming sales of headache remedies and "nite-all" tablets, to big business executives, must have chartered new astronomical curves. Yes it would make interesting reading. Anyone remember?

But whether anyone does remember (and we'll hope that at least one will), those who attended the thirtieth anniversary's *Pacific Coast Investment Forum* have a great deal to remember, for much time and effort went into the preparation of an excellent panel of speakers, under the able chairmanship of Robert H. Perry, Joseph Edelstein, Philip A. Fisher, Fred H. Merrill and Philip J. Fitzgerald. For more information about the Forum's topics-to-remember, see pages 57 to 71.

Our 'Designated' Correspondents: 23 Strong!

Some months ago we sought, in a letter to the Societies which comprise *The National Federation of Financial Analysts Societies,* the appointment of a liaison representative between each Society and The Journal. Our aim was, at least, twofold: (1) to drum-up more interest among member subscribers, and so induce them to join our roster of distinguished authors; and (2) to have one man or woman, from each of the Societies, constantly looking out for financial material—i.e., suitable topics for articles—for our publication.

Frankly, the response was this side of being terrific. But we blame nobody, knowing how the officers of these Societies are constantly pressed for time, time which they freely give away from their regular business activities. And so in the spirit of saving future time, The Journal Committee designated a correspondent for each of the Societies which had not already made such an appointment. The names of all these correspondents are on this page. Now, we know that these designations will come as a surprise to many—but, we hope, a pleasant surprise, as each was highly recommended.

And from strictly an applied psychological point-of-view, we also hope that the effect will be definitely therapeutic in stirring up more interest from within our Federation.

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1959—1960

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A New Cover, An Altered Name

Perhaps we hardly need mention so obvious a fact: we have a sparkling new cover and we've made a minor alteration to our name. We figured that as finance is our dish we could be a bit more specific with our name — and so, *The Financial Analysts Journal*, with the word "Financial" sort of sitting in the background, but sitting commandingly.

After all, we're financial men not medicine men (to paraphrase a once familiar statement by a tobacco manufacturer). And this is not as funny as it sounds, for among many others, Larry Kahn, now president of the New York Society, tells us that he's been ribbed over the years by friends who jokingly inquired, "just what profession are you in?"; or, "are you practising psychiatry without a license?" Add to this the fact that we get several new subscribers yearly who jump to the conclusion that there's a new magazine in the field of psychoanalysis. Ah well. And so, with the changing times . . . well, you've seen what we've done. Hope you like it.

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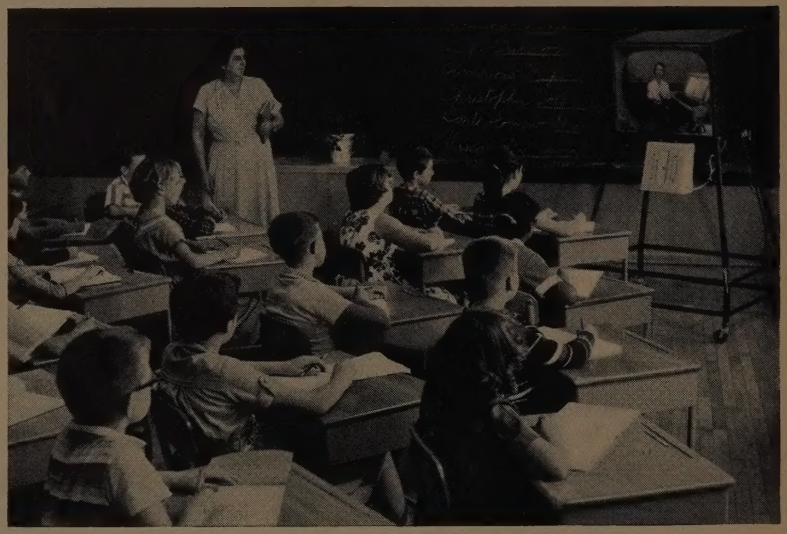
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TEACHING BY TV

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HELPING TO TEACH . . . HELPING TO LEARN. Classroom scene in Cortland, N. Y. This is one of the schools now using Educational TV. More than one TV receiver can be used where teachers wish to accommodate larger classes at one sitting.

An interesting current development in education is the use of television for instruction—both in classrooms and in the home.

Evidence that a shortage of qualified teachers is developing coincides with the need for some way to meet the awakened interest in mathematics, physics, chemistry, and education in general—from the elementary school to the college level.

Many educators, in studying the twin problem, are thinking more and more about the possibilities of Educational TV in their teaching programs.

In transmitting TV lessons and lectures from place to place, various means are available. Closed circuit Educational TV systems between schools may be required. Or connection between broadcasting stations in different cities. Or a hook-up between closed circuit systems and one or more broadcasting stations.

Whatever distribution of TV is needed, in city, county, state, or across the country, the Bell Telephone Companies are equipped to provide it. They have the facilities and years of know-how. And the on-the-spot manpower to insure efficient, dependable service.

For over three years, the local Bell Telephone Company has provided the closed circuit ETV network which successfully serves thirty-six schools in Washington County, Maryland.

In Louisville, Kentucky, telephone company facilities now connect five elementary schools. In New York State, they serve a high school and seven other schools in the Cortland area.

In San Jose, California, they link four schools with the campus of San Jose State College. And in Anaheim, California, eighteen schools are served by TV.

The largest of the many current educational TV projects is called Continental Classroom. The Bell System is one of the business organizations which support it.

In this great "classroom," about half a million people get up early each weekday to view a half-hour lecture on Modern Chemistry on their TV sets at 6:30 A.M. This 32-week college course goes from coast to coast over Bell System lines.

The Bell Telephone Companies believe their TV transmission facilities and know-how can assist educators who are exploring the potential value of educational television.

They welcome opportunities to work with those interested in this promising new development.

BELL TELEPHONE SYSTEM

THE BUSINESS BOOM OF 1960

by Lawrence R. Kahn

WHILE CONTINUOUS REAPPRAISAL is the essence of the Financial and Security Analyst's task, the beginning of a new year normally calls for a broader and more objective stocktaking of the business situation. At this time, the Analyst must "look before and after." We must see where we have been and where we are, in order to give us some inkling, murky though it may be, of where we are going.

The year just completed was a highly significant one in many cases. Possibly the importance of certain of the developments may be only fully comprehended and appreciated well in the future. Other events, while negative, for the short term, may actually prove to be advantageous over a longer period of time. The sum of the happenings for the year, however, can be held to have been highly constructive.

A brief review of the past year's developments is called for in order to give us the spring board to develop what we may see in 1960. For the sake of simplification and ease of understanding, I shall break down this review into three categories: economic, political and financial. Obviously, they are all highly interwoven, but these interrelations need not be dealt with at this time.

On the economic front, 1959 may be termed the year when we moved from recovery to expansion only to have the latter nipped in the bud by the cumulative effects of the steel and non-ferrous metals strikes. Nonetheless, Gross National Product probably equaled $480 billion for the year, or a gain of about 8.2% from the $441.7 billion shown in 1958. In the second quarter alone, GNP was running at the rate of $484.5 billion and it probably would have come close to $500 billion in the fourth quarter had not the strikes interfered.

Industrial production moved in the same fashion as the Gross National Product, but owing to the absence of the leavening effects of the steady secular rise in service operations, its movements were somewhat more volatile. From the low point of 126 on the FRB Index in April of 1958, the industrial production rose steadily until it reached a peak of 155 on the index in June of 1959. Admittedly, the peak was somewhat exaggerated as it was arrived at under the forced draft of inventory accumulation brought about by the steel strike threat. When the threat became a reality, industrial production turned downward, dropping to a low of 148 on the index in October, and possibly to a moderately lower level in November. Actually, the decline in industrial production—when one considers the fact that the peak was artificial—was considerably less than could have been anticipated. Not only did the non-durable goods sector hold right at its peak levels, but the decline in the durable goods division, ex the metals, was relatively moderate.

Inflation Seen as 'a Bogy'

The year witnessed other important developments in the economic field. The spector of inflation, which rightly or wrongly had been held up as a major factor in our economy, appeared to have been brought under control. Wholesale prices held remarkably steady during the year with the variation from high to low amounting to less than eight-tenths of 1%. As a matter of fact, inflation, in the past number of years, appears to have been more of a bogy for political and stock market purposes than an actuality; or possibly we should say, more of a threat to the future than an actuality in the present. Not only, as previously stated, did wholesale prices hold steady in 1959, they have held at almost the same level for the past 2 years, or one of the longest periods in history with a minimum degree of fluctuation.

This past year also witnessed two important reversals of trend which should have a major influence in 1960. New plant and equipment expenditures, after having declined steadily from the fourth quarter of 1957, turned around in the fourth quarter of 1958 and began to move up at an accelerated rate throughout 1959. From a low point of $29.61 billion annual rate in the third quarter of 1958, expenditures were estimated to be running at $35.34 billion annual rate by the fourth quarter of 1959. Furthermore, the gains in these expenditures throughout 1959 were consistently at a higher rate than previously anticipated, and of even greater importance, reflected actual expenditures rather than rising prices.

The year also witnessed the turn around from inventory accumulation to inventory liquidation, and possibly, by the final month of the year, the resumption of accumulation. It is in this phase of the economy, coupled with personal income and unemployment, that the steel strike had its greatest impact. The accumulation was accentuated by the deliberate attempt by many industries to protect themselves against the likelihood of the strike. The intelligence of this move was well reflected in the only minor decline in business activity

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when the strike occurred. On the other hand, the prolongation of the strike brought about liquidation of inventories, particularly in the metal working and automotive fields.

It is significant, in considering both the inventory accumulation and liquidation of the past year, to evaluate the relationship of inventory to sales. While business inventories were steadily built up during the first seven months of the year, the rate of accumulation was actually no faster, and in certain months somewhat less, than the gain in sales. As a result, the inventory to sales ratio, which stood at 1.49 in January, dropped to 1.44 in both May and June; and while it rose slightly in July and August, it again declined in September, and probably further in October. In other words, despite the building up of inventories, the relationship to sales was one of the lowest in a long period of time and well under the typical 1.60 rate of the past number of years. This condition clearly indicated the underlying strength of the recovery movement.

Importance of the Common Market

In the political arena, both world-wide and national, the year witnessed what may be eventually set forth in history as some of the more important developments of the era. The European Common Market came more realistically into being, and the "Outer Seven" European nations shaped up as a possible collaborator, or possibly a competitor, with the Common Market nations. The free world's resistance to pressure on West Berlin brought about a change in tactics on the part of Communist powers, which culminated in Khrushchev's visit to the United States and the Camp David discussions. While only history will be able to say whether this was a diversionary tactic, or a real beginning of the thaw in the cold war, it can at least be said that despite the problem in the Far East, some easing of tensions took place.

Domestically, real resistance on the part of the administration to inflationary expenditures, and a strong determination on the part of the Federal Reserve Board to maintain control of the monetary situation, made an important impression abroad as to the sincerity of the United States Government in maintaining the value of the dollar. The amazing resistance of the steel industry to the one-way type of labor bargaining, that has characterized union discussions since the end of World War II, revealed an understanding that wages and prices could no longer continue to move upward without reference to productivity. On the other side of the coin, the continued drain of gold from the United States had certain political implications, a major one being that the Western European nations began to eliminate or reduce import quotas on American products. While in itself, this move, without coordinated tariff adjustments, had only limited immediate significance, it augured well for the future.

In the financial field, we find with the exception of the politically-controlled ceiling on interest rates of medium and longer term government bonds, money rates were permitted to find their proper level. While rates rose sharply in line with the improving business demands, there was, on the whole, no particular shortage of available funds—political outcrys to the contrary. On the other hand, because of the overshadowing importance of the federal and local government financing in the money market, which has developed over the past generation, the ceiling on long-term government interest rates brought about a distortion between short-term and long-term rates. Both, however, rose sharply. Long-term governments rose from 3.1% in May of 1958, to 4.2% by the latter part of 1959. On the other hand, the "magic 5s" set the tone for the short and medium-term money market.

The stock market had less of a definite trend than the bond market in the past year; but it was more heartening. While stocks rose rather consistently, with only three minor corrections, from the beginning of the year to the peak early in August, the entire rise, as measured by Standard & Poor's 500 stock index, amounted to only 8%, and the subsequent correction during the latter months of the year brought the market, at its low in September, down to the level at the beginning of the year. During the final quarter, under the uncertainty brought about by the steel strike, the market tended to move along in an extremely narrow range, considering the height of the market. This lack of trend was, to a degree, camouflaged by the pyrotechnics of some of the more dynamic electronics and motor shares. On the whole, the year can be said to have been an excellent justification for the Analyst who stresses the need of selectivity in security investments.

For the Financial Analyst, as for Shakespeare, "The past is prologue". Where are we going is of far more vital interest than where we have been. Here, however, I can venture only in the economic fields while making only a passing reference to the political factors that help shape the world.

Strong Rise Seen for 1960

While the effects of the steel and non-ferrous metals strikes delayed the move from the recovery to the expansionary phase of the business cycle, it is questionable whether the effect was any more than retardation rather than a change of trend. *Assuming that the steel strike will not be resumed or that if it is, it will be of extremely short duration, a strong upward pattern for business, as a whole, can be foreseen for not only the first half of* 1960, *but probably for the entire year.* Certain underlying strengths that help maintain the general business picture, in face of the most severe strike that the nation has witnessed since World War II, continue to be of basic importance for the coming year.

The most consistent of the underlying strengths in our business picture in the entire post-war era, has been the well maintained trend of consumer purchasing power. Real income, which is personal income on an annual basis adjusted for cost-of-living, rose rather steadily through 1959, dipping only from July through September, and should continue upward again at new

record levels through the greater portion of the current year. Confidence, which has a value almost equal to the level of income—when directing consumer purchases—is likely to be maintained at a good level as working hours remain high and wages move slightly upward. With basic purchasing power an extremely strong factor in the economy, business will be further aided by the effort to rebuild the inventories liquidated during the steel strike. It cannot be expected that the inventory build-up will have the same impact as it had in late '58 and early '59, when recovery was under way as the present level is still fairly satisfactory; but certain industries will certainly witness greater activity than called for by apparent consumption as they attempt to fill the now depleted "pipelines."

A further factor leading to the favorable outlook for the current year is the indicated increase in new plant and equipment expenditures. These are likely to rise substantially again this year, and may easily approximate and possibly exceed previous 1957 peaks as business demands heighten management's optimism.

On the negative side, and as a relatively restraining factor, residential building construction should easily run 15% below the high level of 1959. Nevertheless, the approximately 1,100,000 new homes, which may be expected, still represent a strong underlying support to the business picture. Also, on the negative side is farm income. A further reduction in this portion of the economy can be expected. On the other hand, it must be pointed out that from an economic position, the farmer's place in the economy has been substantially reduced and that his importance is far more of a political nature than of an economic one.

On the political scene, and the farm problem is, of course, a hotbed of political machinations, it is well to point out that 1960 is a Presidential election year. While there is nothing to say that the following is any more than purely coincidental, it is worth noting that in every Presidential year since 1932, there has been an upward trend of industrial production, if not for the full year, at least during the latter half of the year. It is questionable if that will change.

In the areas of finance, predictions are more difficult to come by as the psychological has to be weighed against the economic. Unless an uncontrolled boom develops (which appears highly unlikely at this time), it seems that we may have witnessed close to the peak of interest rates for the present move of the economic cycle. While somewhat higher rates may still take place, especially if Congress continues to play politics with long-term interest rates on government bonds, further rises are apt to be modest in relation to what has already taken place. On the other hand, no material weakening in interest rates appears likely during the year.

The present level of the stock market, even though down modestly from its September peak, is still so high that there is a heavy portion of the psychological mixed in with the economic, in the determination of the prices of many of the securities. Certainly, the economic outlook for the majority of industries, excluding those relatively dependent upon residential construction and the farm market, is favorable for 1960. This should spell higher earnings and, in many instances, larger dividends. What ratio the public will tend to put on these earnings and dividends will vary with the political and social climate of the day-to-day and month-to-month operation. It would appear here, however, that while selectivity will be the key-note, the general trend, during at least the earlier months of the year, should be upward.

New York Security Analysts Open Own Club Quarters

It was late in December of 1959 when The New York Society of Security Analysts realized a long-cherished dream: to have its own club headquarters, appropriately furnished, for the daily luncheon meetings at which America's top executives appear to address and to answer questions which interest the investing public.

It's now an accomplished fact. The new, elegant, and long-awaited club occupies the entire second floor of 15 William St., just a stone's throw from Broad and Wall Streets.

The club has three dining rooms, lounge, library, complete kitchen, and manager's office, as well as serving pantry and bar.

Air-conditioned throughout, the Club also has a built-in projection room—as part of the main dining room—with all facilities for motion pictures, slides and tape recordings.

The main dining room seats approximately 300, with a permanently installed speakers panel. The public address system is so wired that an overflow audience can clearly hear a speaker anywhere in the Club.

The Board of Directors' room (which can also be used as a dining room, seating 24 persons) will display portraits of past presidents and distinguished guest speakers. This room will also serve as a pre-luncheon, or dinner, cocktail lounge for honored guests. A door opens into the main dining room, to provide easy access to the speakers' dais.

The third dining room, called The Tavern, will seat approximately 65 for luncheon or dinner.

With wall-to-wall carpeting and indirect lighting throughout, another feature is a stairway exit, directly from the main dining room to the lobby, only one floor below.

Plans call for the club to be open all day and into the evening.

GOODYEAR DIVERSIFICATION AT WORK



4-Miles of Belt to Fit a Giant



The Niagara Power Project will be truly *gigantic*—starting with a diversion channel and 2,800-acre reservoir to store millions of tons of power-producing water from the Niagara River. Hundreds of tons of material required each day for the creation of this giant will ride—economically and without interruption—on more than four miles of Goodyear conveyor belting.

Goodyear conveyor belts are speeding work, cutting costs in many places where large quantities of bulk materials must be moved.

These highly efficient belts are only one of the many products made by Goodyear for large-scale construction projects. They are only one of thousands of rubber, metal and plastic items developed by the Industrial Products Division of Goodyear. The Division is just one in Goodyear's vast network of facilities making products which contribute to industrial progress and better living.

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A Reappraisal of Canada's Economy

by James H. Schurman

AFTER THE POST-WORLD WAR II DEPRESSION psychosis had subsided, there followed a period of extremely strong demands for basic raw materials throughout the world. The Korean War, the Paley Report, and consumer hunger for goods, all were contributing factors. At this time Canada stood out as the obvious source of supply. This country was equipped both physically and politically to proceed rapidly with the development of its natural resources; all that was required was capital. Investors all over the world, but more particularly from the United States, answered the call. Coincidentally with the start of the enthusiasm came the discovery of oil in Western Canada. This was all that was required to set off a speculative boom of sizable proportions.

The stock market in Canada rose rapidly and optimism was such that securities were purchased for earning power 10 years forward. *Table I,* showing industrial stock indices in Toronto, as compared with New York, based on 1947 = 100, demonstrates the reaction.

Table I

Index of Stock Prices
1947 = 100

Year ended December	Toronto Stock Exchange Industrials	Standard & Poor's 425 Industrials
1959*	302.9	408.7
58	304.5	376.1
57	302.1	388.4
56	244.0	329.9
55	283.8	319.1
54	280.5	245.3
53	219.8	163.8
52	188.9	177.1
51	200.2	159.7
50	170.3	135.5
49	121.5	108.6
48	106.4	99.6
47	100.0	100.0

*November 28

Until 1954 the Canadian markets outperformed New York. The speculative whirl was far more evident in mining, oil and newsprint issues, many of which were not included in the Toronto Industrial Index. As a matter of fact, in the natural resources field, the interest continued until 1956.

During this time, new sources of raw materials were found; government stockpiling reached quotas, and surpluses cropped up. It then became apparent that the honeymoon was over. Canadian securities, while not exactly falling in disfavor, were not purchased with the same vigor as previously. Today many American investors are looking to European securities as the "growth and glamour" stocks of the future—and it has become fashionable to hold them.

In the interim period, a basic change had been taking place in the Canadian economy. What was previously a natural resources and agricultural country was growing up and developing its own industrial complex. During the speculative excitement of the early fifties, the service industry, retail trade, and other similar type securities were ignored. In 1956 they won some favor, and have since shown a better performance than the balance of the Canadian market.

What is significant at this time, however, is the change evolving in the Canadian economy. This change, combined with the rapid increase in population and income figures, (as evidenced by indices in *Tables II and III*), suggest that the investment climate is not in the least depressing. The president of the Toronto-Dominion Bank, recently predicted that by 1970 popu-

Table II

Gross National Product
1947 = 100

Year	Canada	U.S.A.
1959	250.6*	204.9*
58	236.1	188.5
57	230.8	188.9
56	222.1	178.9
55	197.1	169.6
54	180.6	155.0
53	181.7	156.0
52	174.3	148.1
51	156.0	140.4
50	130.8	121.5
49	119.6	110.1
48	109.8	110.7
47	100.0	100.0

*Estimates

Table III

Population
1947 = 100

Year	Canada	U.S.A.
1959	139.4*	123.5*
58	135.8	120.8
57	132.2	118.7
56	128.1	116.7
55	125.1	114.7
54	121.8	112.7
53	118.3	110.7
52	115.2	108.9
51	111.6	107.1
50	109.2	105.3
49	107.1	103.5
48	102.2	101.7
47	100.0	100.0

*Estimates

James H. Schurman, Analyst, with Montreal's Molson & Co., Ltd., formerly was the investment consultant to a wealthy Canadian family. Prior to that he was with a Canadian bond house. Mr. Schurman is a graduate of McGill University.

lation will have increased by 4.3 million or roughly 25%; living standards will be raised by an equal percentage, and that Gross National Product would exceed $50 billion. Related to *Table II* this means the index would exceed 365; or in other words GNP more than doubles every 10 years. The investment climate is truly exciting!

For the last three years the stock markets have shown little gain in Canada. Throughout that period the economy has had a slight recession, though not as severe as in the U. S. (see *Table II*), and has not recovered as quickly. All indicators suggest that 1959/1960 will see a reversal of this situation.

The Bank of Canada has more and more moved very strongly to curb inflationary pressures; and in this they have met with some degree of success. For example, 1959 projections were that GNP would be 7% higher than in 1958. (It appears that this projection is on the low side). Cost of living, on the other hand, has risen only nominally—something less than 1%.

This anti-inflationary action, on the part of The Bank, has not been without its problems. Short-term interest rates in Canada have exceeded those in the United States by a full percentage point for almost a year. Similar dislocations have occurred in the longer maturities. The outcome has been a strong flow of funds into Canada to take advantage of these high rates. As a result, the Canadian dollar has firmed to a level in excess of $1.05 U. S. Exporting industries have suffered from this. The pulp and paper industries more particularly have felt the impact.

Current evidence suggests two things: (1) the Canadian budget will be in near balance by March, thereby easing pressures on the money market; and (2) interest rates in the U. S. are rising in response to Federal Reserve Board efforts to curtail inflation. These two factors will help strengthen the U. S. dollar. With demands for materials strong in 1960 Canada's exporting companies should show remarkable increases in earnings.

The immense growth potential presents an extremely bright outlook for manufacturing and service industries within the country. Many securities in these fields of blue chip quality have been ignored by foreign investors. In the steel industry, where growth since World War II has been phenomenal, there are stocks, such as Steel Company of Canada, selling on an 11 times estimated 1959 earnings, with 1960 earnings expected to be even higher. On a cash flow basis the figures are even more impressive.

In the finance field, Industrial Acceptance Corporation compares favorably in experience with leading U. S. companies, but sells on a lower earnings multiple. It is not only operating in a faster growing market than that of its counterparts in the U. S. A., but in addition the market has not yet reached the same saturation level.

The food industry, the banks, and the breweries, all offer examples similar to those already stated. There are many investment class securities available in Canada.

For the investor there still exists attractions in the natural resources field. The gas industry is about to embark on a new stage of expansion, thus offering fine opportunities. International Nickel, one of the favorite 50, has tremendous potential. (Some thanks to Cuba's Fidel Castro!) Kerr-Addison, one of the finest gold mines in the world, with continually increasing quantities and grades of ore, is a top-grade investment.

This has been only a brief outline of the potentialities offered in Canada. While, due to over enthusiasm, some investor interest in Canada has subsided, the time has come for a reappraisal.

A great French-Canadian, Sir Wilfred Laurier, once said: "The twentieth century belongs to Canada". This, more than ever, is true today!

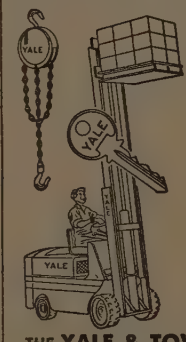
Winner Returns Monetary Award and Builds Helen Slade Sanders Scholarship Fund

While retaining the honor of being the first winner of the Helen Slade Sanders Scholarship, Mrs. Sylvia Auerbach has returned the $700 award to Columbia University. She is continuing the study of financial journalism at her own expense.

Referring to this refund, Edward W. Barrett, Columbia's dean of journalism, expressed the wish that "Mrs. Auerbach remain the titular winner of the scholarship, which is an honor in itself." Five hundred dollars will supplement the original $14,000 gift, and $200 will be turned over to the Dean's Emergency Fund—for aiding deserving students, it was explained.

(The Helen Slade Sanders Scholarship was established by The National Federation of Financial Analysts Societies, late in 1957, for the study of financial journalism in Columbia's Graduate School of Journalism. It was the first of its kind. Helen Slade, as she was known professionally, was the former managing editor of *The Analysts Journal*—Editor).

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287th Quarterly Dividend

37½¢ a Share

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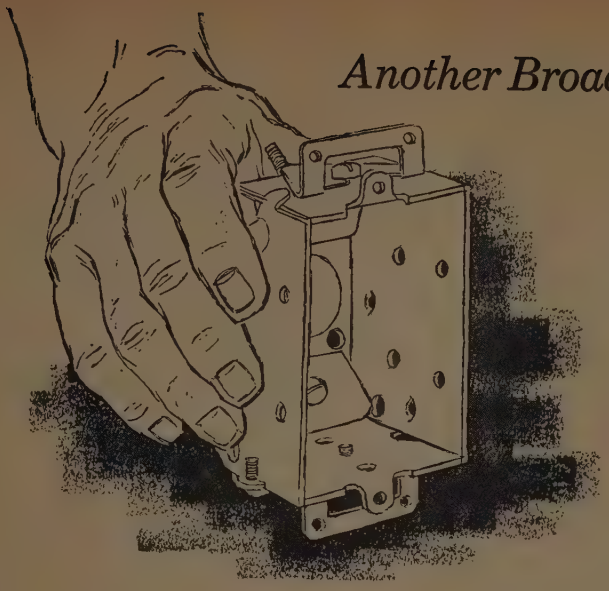
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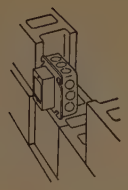
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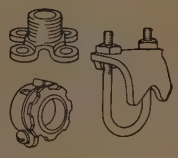
Elmer F. Franz
Vice President & Treasurer

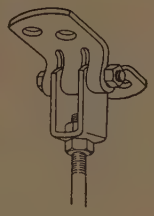
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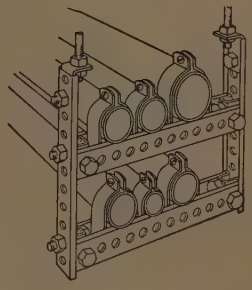
Another Broad Avenue of Growth...







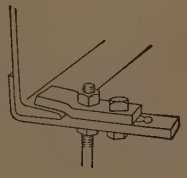




New Diversification for

AMERICAN-MARIETTA

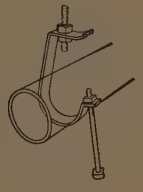
...*Electrical Construction Products*



As a major supplier of essential products for construction, American-Marietta's position was further diversified when the Steel City Electric Company of Pittsburgh joined the A-M family of companies on November 12, 1959.

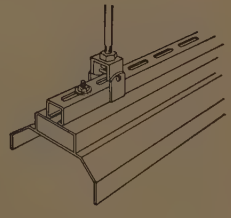
Steel City, whose lines are considered to be among the most complete in the industry, produces more than 2,000 electrical construction items.

Its products include switch and outlet boxes, conduit and cable fittings, cable and duct support channels, conduit and pipe hangers, lighting fixture supports and framing channels.



Scheduled to begin next year is a new $3 million facilities expansion program which includes the construction of two new plants and a further broadening of product lines.

With the rising need for electrical facilities in all types of buildings, Steel City Electric is expected to make an important contribution to American-Marietta's future progress.



American-Marietta invites you to send for its new 64 page brochure, "Plants, Products, Processes." It depicts A-M's progress through creative research and strategic diversification—from the Company's inception in 1913 to its recognized position today as one of the nation's leading industrial corporations.



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Progress through Research

SULPHUR DEMAND at RECORD LEVEL

More sulphur was consumed in the United States in 1959 than in any previous year. And near-record quantities were shipped abroad.

The steadily increasing demand for sulphur—averaging between 3½ and 4 per cent annually—continues apace. The long-established uses for sulphur and sulphuric acid by such major consuming industries as fertilizer, chemical, pulp, pigment, textile, and steel are growing, and new uses are constantly being developed.

Among the newer products requiring increasing amounts of sulphur in one form or another are synthetic detergents, aerosol sprays, high-octane gasoline, and many new chemicals. Processing metallic ores with sulphuric acid is also a recent development with growth prospects. One-half million tons of acid are now being used annually to leach uranium ore alone.

Freeport is well prepared to help satisfy the growing market for sulphur. Our underground reserves are the highest in our 47-year history, and our productive capacity will soon be increased greatly by the completion of facilities to mine one of the largest sulphur deposits in the world.

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Economic Issues in the Stabilization of the Iron and Steel Industry

by Reuben E. Slesinger

DURING THE YEAR 1959, more attention was focused on the economic significance of the iron and steel industry than has been the case for this or any other industry in any comparable peace time era. The importance of the industry for national economic well-being was realized early during the days of the prolonged strike. Estimates vary considerably as to the costs of the nearly four months of work stoppage. It will be some time, however, before all the indirect costs may be calculated. The total of the direct and indirect economic burden easily could surpass 10 billion dollars.

But, the specific issues and strike problems that currently confront the industry are not the only ones with which it now is concerned. There is a much more fundamental problem; namely, the question over the continued position of dominance and strength of the industry in face of growing competition from foreign producers, higher costs domestically, and increasing technical advances. It is this cost position, more than a few cents more or less in wages, that threatens the international position of the American iron and steel industry.

It would not be very difficult for the industry to grant these few cents in increased labor costs were it in the position to take advantage of all the savings that could accompany increases in productivity. But, here is the point at which organized labor opposition is met. Believing in the old "lump of work" idea, opposition is generated against anything that seems to reduce the number of man-hours of labor required. This view has become stronger in recent years for two reasons: one, is the technological fact that the industry is able to increase its productivity rate faster than increases in the demand for its product; and the second is the fact that the iron and steel industry is finding itself in the position of being able to produce a greater absolute product with a declining labor force. Moreover, the picture of employment in the industry is a mixed and unstable one, showing considerable ups and downs, in short as well as in longer run periods.

It is felt that much might be accomplished towards stabilizing this industry in the moderating of the wide cyclical swings of both employment and production. If a more regular pattern of employment and production were possible, it would seem that an avenue might be opened for reducing some of the marginal costs of extra laborers during rush periods, spread these out among the more regular employees, maintain a more regular rate of production and employment, and thereby reduce costs of operation.

Violent Fluctuations Characteristic

The foregoing is a large order and not easy to accomplish. To begin with, historically this industry has experienced more violent fluctuations in production and employment than industry as a whole. This is not a characteristic of the United States alone, but has been the experience in the steel industry in Germany, England, and France. Usually the first answer to why this occurs is couched in the nature of the derived demand for steel products. This is all part of the familiar acceleration principle, which tells us that smaller movements in the final products industries will generate considerably greater fluctuations, both plus and minus, in the producer goods industries.

Thus, even though the automobile or appliance industries may be enjoying a fairly heavy demand and relatively prosperous conditions, the steel industry could be suffering. In order to keep pace, then, a derived demand industry such as the steel industry, must enjoy an ever increasing demand for its products. But, in this respect it is interesting to note that, in spite of a substantial increase in steel production since World War II, there has been a decrease in the man-hours of employment. This focuses attention on the nature of the problems confronted by the industry if it sets as policy the stabilization of employment—especially at a high level of employment.

Attention given to the employment problems stemming from the foregoing situations should not be taken to overlook the other causes of production and employment irregularity, such as those brought about by economic and cyclical fluctuations in the economy in general, seasonal factors, and technological changes. Technological change, most dramatically characterized by the displacement of hand-rolling by continuous rolling mills and the rapid pace of automation, has proceeded at a very rapid rate during the last decade and a half in this industry. In general, however, there has

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been a remarkable lack of friction on this score in the steel industry until the last few years. This, more than likely, may be attributed to the fact that the overall demand for steel products had been high, most plants operated at 90% or better of capacity, and the nation, as an economic community, was booming. It was only when there was a slowing down, and reversal of this trend, that the question of technological advances and unemployment became a general issue, as dramatized in the 1959 strike.

Here, as in many cases of economic analysis of an industry problem, there is the danger that general economic occurrences in the nation may cloud the real issues that confront specific industries and firms. But, it is reasonable to expect that the steel industry will grow, during the next decade, at least as much as the economy itself. Under such an assumption, it is reasonable again to expect that the problems created by technological advances in the industry should be manageable. Since seasonal variations, too, are becoming less severe, the real problem of stabilization becomes the swings associated with the derived nature of the industry demand.

Managerial Responsibility

It is a basic responsibility of management in this, as well as in any industry, to initiate actions designed to alleviate the problems of production and employment irregularity. If this is not the case, then one can expect employee sentiment to build up to the point where its political manifestations easily might take the form of all sorts of regulatory laws and restrictions. To plan such a program is easy relatively; to implement it is the more difficult task. Decisions must be made, and a whole series of planning stages must be passed through before these can be handled intelligently. Management must recognize the problem fully; this is a first and basic must. The company policy must be geared to what sort of objectives are set forth. This requires a program of production regularization.

Competent executive talent needs to be assigned for purposes not only of executing the program but to maintain constant supervision and follow-through. Whatever program is adopted, it must be translated into constant action and made an integral part of the firm's operations. The results of the program obviously should be reviewed regularly. The task is a large one; and so it is necessary that spheres of responsibility be assigned to responsible personnel. For a successful program, more than just executive personnel responsibility is required. In fact, the parties who are interested in the fruits of stabilization—the owners (stockholders), employees, the public in general, as well as management—all must share in the responsibility for making a program of production and employment regularization work. But, the initial action in organizing an attack upon the problem still vests in management. This is a fundamental responsibility that cannot be shifted.

In attempting to formulate a program for employment and production stabilization and regularization, management soon will become aware of the fact that it cannot operate in a vacuum without giving adequate consideration to what is transpiring in the economy in general. Thus, any program developed for the iron and steel industry must be consistent with the context of any broader program that industry in general is following. This does not mean to imply that there must be a lag between a more progressive program of a particular industry and the pace of overall economic growth. Surely, special problems of particular industries must be recognized and taken into account in their own planning.

For example, in the steel industry a most pressing problem is finding expanded markets for the greatly increased production capacity of which the industry is capable. This is why the cost position of the American industry in world markets is so important. The real expansion in the demand for steel products today rests in the potential of overseas markets, particularly in the lesser developed countries that have begun to industrialize. But, so long as cost plus factors continue to operate in an inflationary manner in the United States, the hope of domestic concerns entering these markets competitively is dimmed. If programs directed at production and employment stabilization and regularization can do anything by way of reducing costs of production, they will be of untold benefit in helping firms find foreign outlets for their production. This, incidentally, is not a problem unique to the steel industry alone. But, here we have an example of a type of industry which, from its very origins in the United States, was internationally dominant and never concerned itself with outside competition. But, today, more and more, instances are appearing where foreign producers not only are underselling American steel in overseas markets, but are able to undersell domestic producers in the United States itself.

Firming Output Patterns

We already have indicated the significance of derived demand in contributing to the unusual fluctuations in the steel industry. Thus, it would be helpful by way of stabilizing this industry if other types of production, too, attempted to regularize their patterns of output. A 5% decrease in the sale of clothing, for example, would hurt this industry but might generate a substantially larger decline in the demand for textile machinery as only replacement demand and no new or net investment will follow. Ultimately, the demand for machinery for replacement could drop, thereby generating a tremendous decline in the demand for investment goods—the type of industry so vital for the welfare of the steel industry.

Similarly, a reduction in consumer spending in other sectors of the economy, during a recession or readjustment period, has like effects on the demand for railroad equipment, building materials, machinery in general, agriculture implements, housing, and the like—all significant steel-using demands. Thus, it is that the demand for steel shows a much more accelerated pattern when compared to the demand for the ultimate consumer end products. Steel output, therefore, being dependent to such a great extent on the level of fixed investment (for

replacement demand), as well as on the increase in demand for durable consumer goods (new investment), tends to fluctuate more widely than other types of manufacturing industry.

Another problem that is quite unique to the steel industry is the fact that most production is handled on a "to order" basis. Thus, there is little opportunity to continue production for inventory purposes during slack periods. The only way that steel mills can produce for inventory is when their customers themselves are acting in this manner. But, this is really not the steel mill itself producing for its own inventory, in the attempt to stabilize production schedules. Anything that could be done by way of standardizing the nature of steel products would contribute considerably in this respect.

Factors to Be Understood

Management has a further responsibility in connection with adequate forecasting and interpretation of industry trends. These refer both to estimates for the economy and the world in general, as well as predictions for the industry and the firm itself. This requires good judgment as to future products, competitive substitutes, and economic growth. The capability of the steel industry to produce—and this is true of industry in general—tends to be determined, in the long run at least, by estimates of the future demand for its products, over a relatively long period of time. Here, the influence of a number of traditional secular factors must be given due consideration.

How will the industry demand be affected by growth and changes in population structure? By discovery and utilization of new resources? By changes in the level and composition of Gross National Product? By technology and automation? By substitute products? By changes in the structure of demand? All of these, plus many additional aspects of secular or long range growth, must be taken into account by management when it comes to making plans for plant expansion and utilization.

A steel mill faces these problems in a more unique manner than manufacturing in general because of the unusually long period—as much as two to three years—required for a new plant to be constructed. Although the long-run factors, conditioning investment and expansion decisions, tend to remain much as predicted, there may occur many short-run frictions which could keep output well below the level of production capacity. Hence, an irregularity in production and employment is created. For instance, an important managerial decision, during a recessionary period, would be one such as the following:

Granted that the long run outlook for demand is good, and that because of inflationary tendencies, costs of investment expansion will rise in the future, what should be the decision with reference to expansion at a given time when current capacity may be utilized only 75%, and profits are declining? It must be remembered that corporate management is a paid class and is responsible to the stockholders who might question a decision to continue the expansion under the foregoing circumstances. Yet, under any long-run criteria, an affirmative decision would be called for.

Demand vs. Prices

Because of the long gestation period involved in steel plant expansion, another note of uncertainty is introduced. Significant changes in consumption patterns may occur during the time that is required to construct new plant capacity. Then, once the capacity is in being, the pressure of overhead costs (fixed charges) during a recession tends to stimulate production at almost any price above prime costs. But if costs are sticky and relatively high, as they tend to be in the steel industry, there may be little opportunity afforded to stimulate demand by lowered prices. This may cause a cut-back in production, and again employment will fluctuate.

In addition, pressures will be generated for the substitution of labor by capital, especially if capital input is more economical. This is one of the serious repercussions to the labor group that may follow a long-term collective bargaining contract that ties wages (and costs) to certain levels that later may not be associated with the ability of the firm to pay these rates. To mention but one example, escalator clauses that tie wage rates to the cost of living make the erroneous assumption that the ability of a firm to pay wages is linked with the cost-of-living, and in a direct proportion to any change in this index. Such a correlation could be nothing more than accidental. But, it is such thinking that causes the multitude of inflationary pressures that stem from wage contracts. Flexibility in labor costs is essential for the success of a program of production and employment stabilization. Otherwise, the tendency of the employer will be to maintain a given wage rate at the expense of firing some workers and substituting other factors of production for them.

If a particular firm in the industry is especially dependent on foreign orders, serious irregularities may result with changes in the international picture that are beyond the control of the concern. This is less of a problem for most American mills, but a rather significant problem for some steel-producing countries such as Belgium.

The nature of integration, both backwards and forwards, is an added problem that management must take into consideration in a program of stabilization. The large fully-integrated steel mill owns iron ore mines and coal fields, coking plants and railroads, as well as blast furnaces and other facilities for the actual production of steel itself. To construct such an integrated company, in contrast to a company manufacturing only one product in the various stages of production, requires a heavy investment in fixed costs, with a consequent substantial burden of fixed charges. Any decrease in demand, therefore, will tend to affect profits considerably more than in proportion to the decrease. In the past this has led to all sorts of practices, ranging from cut-throat competition to tacit and actual agreements tending towards re-

straint. More recently, the approach of management has been to undertake numerous cost reduction programs designed to make it economical to operate at a lower break-even point. But, frequently this has been through the substitution of capital for labor, again adding to the irregularity of employment in the industry.

POSSIBLE STABILIZATION MEASURES

A good beginning towards meeting the problem of production and employment stabilization is to get the facts. The first step in this direction is to determine why and where layoffs occur, followed by an analysis of employment irregularities, both for the particular concern under review, and for the industry and economy in general. Tabulating and analyzing historical employment data, along with past records of sales and production, will be helpful in outlining the structure of a firm. Some clue as to whether irregularities in employment have been the result of fluctuations in sales and production, or the result of other managerial policies, may come from a comparative study of the movements in each of these sectors. These historical data should be supplemented by current facts, such as weekly production and work schedules, and production programming and turnover rates.

It is essential that sales be forecast with a high degree of accuracy, and that production be planned efficiently if any program for regularization and stabilization is to have much of a chance for success. These forecasts are complicated because of the already mentioned sharp cyclical fluctuations in the demand for steel. Continuous improvement in managerial efficiency will be thwarted so long as the danger of employment and production irregularity exist. The officials charged with the responsibility of making sales forecasts must learn at what points to apply qualitative judgments to quantitative data. Opinions from different managerial ranks—sales, marketing, finance, and production—should be solicited. What really is important is that the forecast should be dynamic. A given forecast may prove quite accurate, but often this reflects chance and the balancing of forces as they appear. A really effective forecast is one that is subjected to constant review and revision as the future approaches the present, and as unaccounted conditions begin to manifest themselves.

Sometimes the peaks of production may be lessened if there is any possibility of sub-contracting parts of the production process. Procurement and purchasing policies too have an affect. Irregularities in the flow of materials may produce consequent fluctuations in the flow of finished product. We have already mentioned the influence of price policies on the demand for steel products. More work is called for in the study of the elasticity or inelasticity of the demand for steel goods as well as the whole area of substitution for steel by other materials or the substitution of steel for other goods. The general assumption is that, in the short run at least, the demand for steel is relatively inelastic since it is a derived demand. This means that steel is not particularly responsive to price changes. But recent experiences, especially during the decline of 1957-58, have indicated that there is quite a range of steel prices in which sensitivity is marked, particularly if the steel users have much of an inventory of steel. In the longer run, the possibility of substituting other products for steel tends to introduce a greater sensitivity of steel prices.

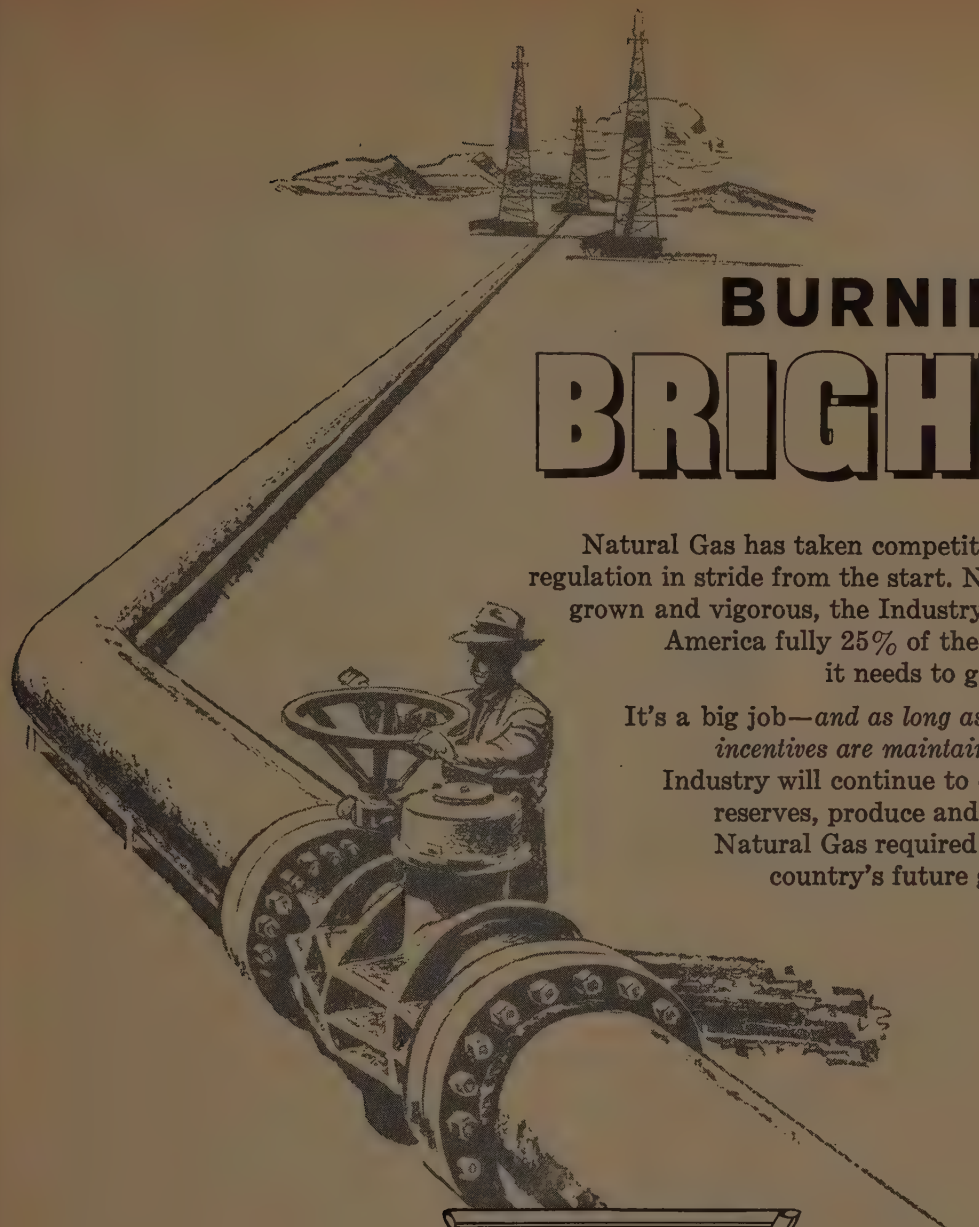
Competition Can Be Keen

Other metals, lumber, plastics and aluminum, to name a few, stand ready to compete with steel if unfavorable price differentials appear in the steel pricing mechanism. In this connection, it is interesting to note the increase in the price of steel ingots during mid-1957, at the same time that the sales of steel were declining. In fact, through most of 1958 steel prices remained relatively stable, while steel operations fell to a level below 70% of capacity. This is a demonstration of the belief that there is a relative inelasticity in the demand for steel—at least in the short run. Dynamic pricing that might have sought to lower steel prices in view of this sales situation was made impossible because of the cost factors that were described earlier.

Another controversial question that relates to regularization is concerned with capacity. The extremes are inadequate capacity and over-expansion. During the 1930's the industry was accused of over-expanding, and hence creating considerable unused capacity that accentuated unemployment of the period. But when World War II was in full progress, the industry was castigated for not having expanded sufficiently. Once again, in 1948, in view of the shortages of steel, the industry was accused of holding back on expansion plans. A controversy developed in which even Ex-President Truman suggested that the Federal government embark on a program of building steel mill facilities. Industry spokesmen pointed to the nature of the market and argued that the shortages were temporary, reflecting the war repercussions. But, before the argument could be settled the Korean conflict produced another steel shortage.

CONCLUSIONS

The problem of maintaining stable conditions in the vital iron and steel industry is bound with the broader issues of maintaining levels of activity on the national and international planes. The steel industry itself, in its inter-connected divisions, can contribute much by making continuous improvements in its efficiency and by adopting a realistic attitude towards prices, expansion, and capacity. There is no over-looking the fact, however, that to attempt to regularize and stabilize employment and production in one industry is hardly possible unless similar efforts are being directed by industry in general.



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		Current Authorizations
Nashville	Consolidation of rock crushing operation	$ 125,000
	Clinker burning and cooling department (to complete)	243,318
	Raw and finish grinding departments	2,050,870
	Material storages and handling facilities	1,169,882
	Other modernization projects	260,930
Rockmart	Raw and finish grinding departments (to complete)	717,685
	Material storage and handling craneway (to complete)	305,434
	Rock loading facilities at quarry	120,000
	Other modernization projects (to complete)	258,123
Superior	Overburden stripping shovel (to complete)	51,234
Des Moines	Augmented stripping facilities	261,100
	Rock crushing plant	988,220
	Clinker cooling improvements	600,000
Cape Girardeau	River dock and barge loading facilities	585,000
Milwaukee	Augmented bulk cement loading facilities	375,000
	Total for large-scale modernization	$ 8,111,796
Other projects	Raw material deposit at new location	65,000
	Barge and truck loading plant at Vicksburg	347,791
	Additional cement-carrying river barges	260,000
	Normal improvements and replacements—all locations	2,394,339
	Grand total	$11,178,926

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Trend of the Military Market

by Dr. Murray L. Weidenbaum

THE LARGEST SINGLE CUSTOMER of American business today is the Department of Defense. Purchases by the Armed Forces currently account for almost one-tenth of the total output of our economy. In addition to its size, the military market is characterized by volatility, technological advancement, long-run nature, and budgetary control.

The volatility of the military market is only too well known. Even in the period since the end of World War II, the trend of military spending has fluctuated much more sharply than the civilian economy.[1] These fluctuations have arisen from such factors as developments in the international situation, changes in military requirements, and shifts in administration policies. These factors are difficult to assess and to forecast. However, knowledge of technical developments and military procurement trends, and an insight into the nature of military planning, can serve as important guides to the market researcher.

Technological advancement is another important feature. The military market is especially characterized by the demand for increased performance on the part of weapon systems. This has meant high obsolescence rates and a shift in emphasis from personnel, and other operating expenses, to capital outlays such as research, development, and procurement of new weapons.

It is interesting to recall the description of the weapon system built around the cavalry soldier.[2] He had three pieces of special equipment: his horse, his sabre, and his carbine. The horse was considered to have the same service life as the individual soldier, 12 to 15 years; both the sabre and the carbine were expected to outlive him and to serve three or four troopers before being discarded. Today, newly-produced items are often obsolete before they enter operational service. Emphasis is now increasingly placed not even on the capacity to produce current weapons, but the ability to design and create weapons that do not exist.

Long-run Nature

A third characteristic of the military market is its long-run nature. As a result of the external threat facing our nation, the military market has become permanent rather than temporary, and *normal* rather than emergency. This may very well be the most *significant* change that has taken place. For example, four-fifths, or more of the equipment of the armies that took the field at the outbreak of World War I, consisted of standard peace-time goods produced in ordinary peace-time production facilities. By 1941, almost one-half of the total material needs of warfare consisted of special-purpose equipment. However, the bulk of this was still material that could be produced by converting ordinary peace-time facilities.

Currently, about 90% of the material needs of defense consists of specialized equipment which is produced in special facilities built for the purpose.[2] Moreover, the variety of requirements is great and growing. The list of the 100 largest military contractors in 1958 included, as might be expected, a goodly number of aircraft and electronics companies. A wide variety of other industries was also represented: automobile, chemical, oil, rubber, construction, steel, shipbuilding, and one airline. The holders of these "prime" contracts subcontract major portions to firms in these and many other industries.

Budgetary Control

A fourth characteristic of the military market is the extent of federal budgetary control. The scale and composition of military purchases are determined by the decisions of the Federal budget process rather than in response to market trends. The authorization of military spending programs results from the interaction of many competing demands and requirements—not only of the various military services but of the numerous nondefense programs and of taxpayers groups. Moreover, the Federal Budget is not determined in isolation but in relation to the expected state of international affairs and political and economic conditions. On the positive side, the budget provides a major portion of the available data for military market research.

Because of these differentiating characteristics of the military market, military market research proceeds along channels not quite conventional for the marketing fraternity. As an aside, the currently available texts on marketing and market research, at most, merely acknowledge the existence of a military customer. Hence, those of us engaged in this activity have by and large had to chart our own course. Without carrying the mariner's analogy much further, it is apparent that the voyage may get rough at times.

I should like to present an approach to military market research, in the light of the problems and factors I have referred to. It rests on an unpatented blend of statistical data, historical relationships, heroic assumptions, and a sufficient mixture of past boners and good guesses usually referred to as *experience*.

1. Footnotes appear at end of article.

Dr. Murray L. Weidenbaum is product economist for Boeing Airplane Co. Formerly he was economist for General Dynamics Corp.'s Convair Division and for the U. S. Bureau of the Budget in the Executive Office of the President. He holds a Ph.D. in economics from Princeton University. Dr. Weidenbaum says that views expressed here are strictly personal.

The following analysis of the military market is developed in three stages:

1. A projection of the over-all level of economic activity.
2. A forecast of the total military budget on the basis of the economic projection.
3. An allocation of the military budget, particularly of those areas of major interest to the aircraft industry.

The long-term ability of a nation to sustain a defense effort depends upon the growth of the economy and the share devoted to military needs. Hence, the economic forecast is the starting point for the analysis. *Chart* 1 shows a forecast of the long-run trend of the American economy based on a continuation of recent historical experience The Gross National Product (GNP) is estimated to rise to a level of 870 billion dollars in 1975, in terms of the 1957 price level. This is a long-term trend-line, and year-to-year fluctuations around the trend have not been plotted, or even calculated. The rise in GNP results from increasing population and labor force, mounting research and development programs, and expansions in output per man-hour (productivity). The implicit 4% average annual rise in GNP would permit expansions in each of the major segments of the economy: consumer purchases, business investment, and governmental military and non-military expenditures.

Total Military Budget

Since the end of the Korean fighting, military spending has been rising at a slower rate than the economy as a whole. The responsible factors include the slowdown of the pace of military mobilization which occurred at the termination of the Korean War and the periodic "economy" drives. The projection shown on *Chart I* is based on an estimate that total military spending will decline from 9% of GNP to 7% in 1975. This estimate is predicated on such assumptions as a continuation of internation tensions (cold war), but no actual "fringe" wars involving U. S. military forces.

On this basis, an absolute rise is projected in military spending, from 39 billion dollars in 1958 to 63 billion dollars in 1975. This is intended to be a *realistic evaluation,* not an estimate of the maximum military spending possible in a cold war period.

Budgets of the Services

Essentially, three major customer groups create the demand for military goods and services: the Air Force, the Army, and the Navy. Each of the three services has been assigned specific roles and missions, and each, therefore, has a different set of requirements.

In the period since Korea, the Air Force has supplanted the Army as the largest military customer. This shift is evidence of the increased emphasis being placed on *strategic weapon systems,* rather than tactical warfare programs involving masses of men and conventional land equipment. Combined Army and Navy expenditures were down from 66% of the military budget in 1952 to 51% in 1958.

The projection in *Chart* 2 assumes continuation of the current roles and missions of the three services, with the Air Force primarily responsible for strategic and space programs. On this basis, there would be long-run increases in expenditures for all three services, with the fastest growth in the Air Force, from 18 billion dollars in 1958 to 32 billion dollars in 1975.

The expenditures for the Army and the Navy are expected to constitute a declining portion of the military budget, a continuation of the post-Korean trends. In absolute terms, Army expenditures are projected to rise to 13 billion dollars in 1975, and that of the Navy to 16 billion dollars.

Military Product Categories

For market research and other analytical purposes, military programs are usually classified into six major product categories: procurement of weapon systems; research and development; operations and maintenance;

CHART 1

GROSS NATIONAL PRODUCT AND DEFENSE EXPENDITURES, 1947-1975

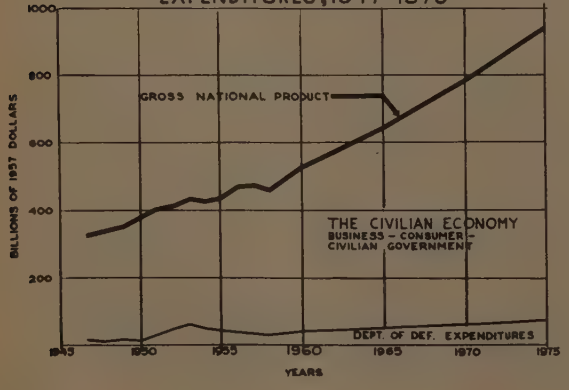


CHART 2

TOTAL DEFENSE EXPENDITURES, 1951-1975

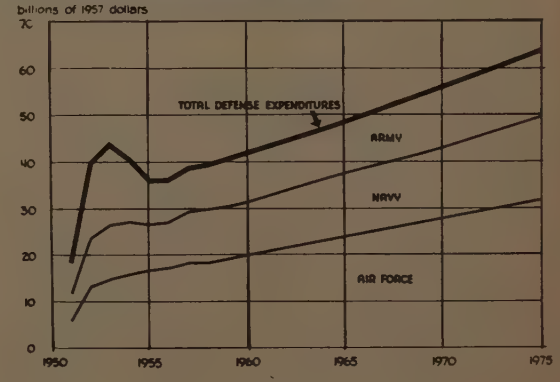
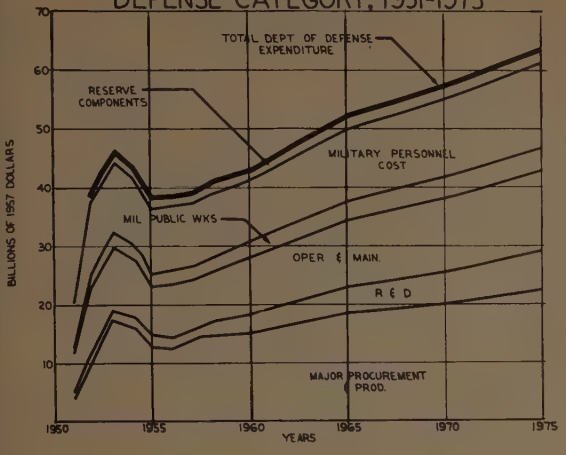


CHART 3

EXPENDITURES BY MAJOR DEFENSE CATEGORY, 1951-1975



construction; military personnel, and the inevitable miscellaneous group. This classification, used in *Chart* 3, is based on official budgetary and military sources. [3 4]

Procurement programs consist primarily of production and purchases of military weapons—such as aircraft, missiles, ships, tanks, and electronic systems. Military procurement in 1958 amounted to 15 billion dollars, 38% of the defense budget. The projection assumes that the upward trend of procurement will continue, as individual weapon systems become more complex and costly. Missiles and jet aircraft have replaced more conventional weapons and expansions in space programs are in the offing. Over-all, the procurement category is expected to retain approximately the present proportion of the military budget. Subsequent charts analyze this category in greater detail.

The research and development category covers the early stages of the weapon creation cycle. The dividing line between the R&D stage and the procurement stage varies over time, by service, and by weapon system. We have used here the "old" concept of R&D (based on the 1959 and preceding budgets). The "new" concept (first used in the 1960 budget) is somewhat broader in that it includes procurement of vehicles for test and evaluation. Historical data are only available on the "old" concept, another source of difficulty for the market researcher.

R&D expenditures currently run at about 2 billion dollars a year or 5% of the military budget. The greater part of the work is performed under contracts with industrial and research organizations, including universities.[5] Sizeable activities are also carried on in the research, development, and test installations operated by the military services. The R&D category is projected to increase rapidly and to obtain a larger proportion of total military expenditures in the future, as a greater portion of the total cost of the weapon creation cycle occurs in this stage.

The maintenance and operation category covers the pay of civilian employees of the military establishment and consumption-type outlays, not covered under procurement. Purchases from private business are mainly petroleum products, spare parts, medical equipment, and office supplies. Operating expenses of this nature totaled 9 billion dollars in 1958, 23% of total military expenditures. The projection assumes that this category will receive in future years a slightly declining proportion of the military budget, a continuation of the trend toward emphasis on development of new weapons. The absolute amount of expenditures in this category is shown to increase as the inventory of military weapons increases in complexity and, hence, in operational demands.

Military public works cover air fields, missile-launching sites, Navy yards, and troop-training facilities. Expenditures in this category were about 1¾ billion dollars last year, or 4% of total military spending. Construction outlays are expected to rise absolutely as well as proportionately, with the growing importance of the ground environment of missile and space programs.

The military personnel category covers the pay, subsistence, and related outlays for active duty military personnel. As of the end of 1958, the Army had 900,000 men on active duty, the Air Force 875,000, and the Navy 833,000. Fluctuations in armed strength furnish a key to requirements for food, clothing, and similar personnel-related demands. The estimates in *Chart* 3 are predicated on a level 2,800,000 armed strength. Important changes will occur in the composition of personnel as technical requirements for operating future weapon systems increase.

Miscellaneous

The remainder of the military budget—about 2%—is devoted to the reserve program, retired pay, and certain establishment-wide activities. The proportion of the military budget which can be devoted to any single major category is limited by competing as well as related demands. For example, procurement of a new weapon system usually gives rise to construction of new facilities from which to operate it. Maintenance and operating costs tend to rise with expansions in procurement programs. Also, a balance must be struck between outlays to develop new systems and funds to produce existing systems.

PROCUREMENT OF WEAPON SYSTEMS

The following section of this paper will treat in greater detail the market category of major concern to the aircraft industry: the procurement of weapon systems.

Air Force Procurement

Within the military procurement category, the bulk of the funds is devoted to the Air Force. The distribution of Air Force procurement is shown in *Chart* 4. Substantial portions of Air Force procurement funds are expected to be devoted to manned vehicles—transport, utility, and other support aircraft, as well as com-

bat aircraft. Missile outlays have been and show all indications of continuing to rise sharply. The much-heralded point at which missile outlays exceed aircraft outlays is still years away. In the future, the distinction between aircraft and missiles becomes increasingly blurred, as space vehicles are developed in both categories.

The amount shown for electronics, rises steadily but not spectacularly. This covers such electronic systems as the Distant Early Warning (DEW) line and the Ballistic Missile Early Warning System (BMEWS). Electronic portions of weapon systems are shown under either aircraft or missiles. The Air Force market can be further classified in terms of basic mission categories—strategic (or general war), tactical (or limited war), and air defense. For example, the following allocation of the Air Force combat inventory is planned for 1960[8]; Strategic, 43 wings; Tactical, 34 wings; and Air Defense, 25 wings.

CHART 4

AIR FORCE PROCUREMENT EXPENDITURES, 1951-1975

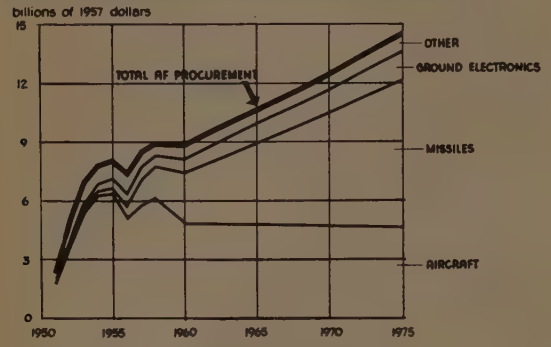


CHART 5

NAVY PROCUREMENT EXPENDITURES, 1951-1975

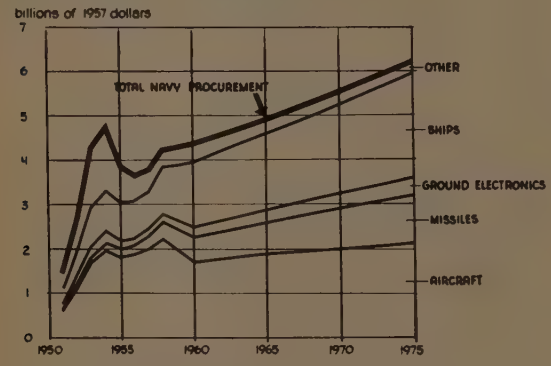
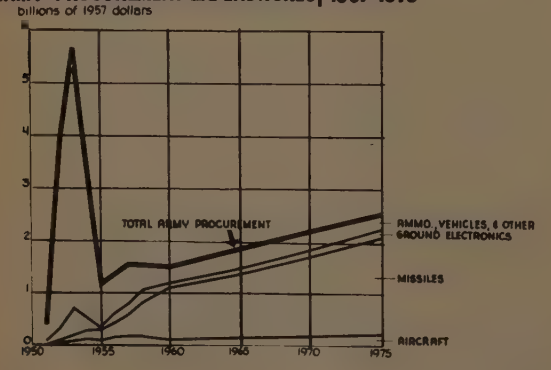


CHART 6

ARMY PROCUREMENT EXPENDITURES, 1951-1975



Much of the information needed for detailed analysis of these categories involves classified or proprietary information which is excluded from this paper. However, open sources such as Congressional hearings and trade and technical literature can provide substantial amounts of information.

Navy Procurement

Three-fifth of the Navy procurement budget is devoted to aeronautical products: aircraft and missiles. With emphasis on such areas as anti-submarine warfare, the outlays in this category are expected to increase. (See *Chart* 5). Expenditures for ships and harbor craft account for slightly over one-fourth of Navy procurement. This category can be expected to increase with the modernization of the fleet and the construction of Polaris-carrying submarines. Other types of procurement, such as conventional weapons, are expected to remain stable or decline.

Army Procurement

Missile expenditures have rapidly become the dominant element in Army procurement. This category rose from about one-fourth of the Army procurement budget in 1956 to almost one-half in 1958, reflecting the sharp shift from artillery to missiles. This trend is likely to continue. Aircraft expenditures account for a relatively steady 10% of Army procurement, with a large proportion of rotary-wing aircraft (helicopters) for utility and support missions. *Chart* 6 shows the impact of limited warfare on military and especially Army procurement. The sharp rise from less than one-half billion dollars in 1951 to almost 6 billion dollars in 1953 occurred primarily in tanks, artillery, and other conventional weapons.

SUMMARY OF MARKET PROJECTIONS

The highlights of the preceding projections of the military market are presented below:

1. The trend of military spending will be rising between now and 1975, although not as rapidly as the economy as a whole.
2. Total expenditures for research, development, and procurement of new weapon systems are rising faster than the military budget as a whole. This trend is expected to continue.
3. Since Korea, the Air Force has supplanted the Army as the largest military customer. With the emphasis on strategic and space systems, this trend should continue.
4. Air Force missile expenditures are expected to

rise sharply but not to exceed USAF aircraft expenditures until well within the 1960's.

5. The emphasis in Navy procurement is expected to remain on aeronautical products—aircraft and missiles—but outlays for submarines and other vessels will rise sharply.

6. Since Korea, missile expenditures have dominated Army procurement, as outlays for artillery and other conventional weapons have declined. This situation is likely to continue.

ROLE OF MILITARY MARKET RESEARCH

Projections such as those in *Charts* 1-6 are designed to convey ideas of future trends and relationships and provide general orders of magnitude, rather than forecast specific values for individual years. Analyses of the military market provide necessary background information for management decisions on product lines, research and sales efforts, and investment programs. The utilization of market research data is a function in good measure of management's acceptance, of and confidence in the market research activity.

Market projections generally depend on the validity of the assumptions made and the data used. However, military market research is a relatively new branch of marketing. Much additional work needs to be done in (1) developing adequate data; (2) designing improved forecasting techniques, and (3) making detailed analyses of the basic building blocks of the military market—specific weapon systems (ICBM's, nuclear aircraft, etc.), and major subsystem components (propulsion, payload, airframes, ground support, etc.). A major advance would be made with the preparation of detailed historical data so that trends and relationships could be more adequately determined.

To the writer, the military market research field is a rather unique combination of marketing, economics, and technology. It will develop only as we take the pains to utilize with increasing intensiveness the knowledge and methodology made available by each of these component areas.

(Readers interested in this article should see "A New Economic Barometer Needed to Measure Peacetime Impact of Defense Expenditures," in the November, 1959, issue of this publication—Editor).

FOOTNOTES

1. Murray L. Weidenbaum, "The Scope of the Military Market," Journal of Marketing, October 1959, pp. 17-20.
2. Peter Drucker, "Defense Organization: New Realities and Old Concepts," General Electric Defense Quarterly, January-March 1959, pp. 4-7.
3. The Budget of the United States Government for the Fiscal Year Ending June 30, 1960, Washington, Government Printing Office, 1959.
4. Office of the Assistant Secretary of Defense (Comptroller), Monthly Report on the Status of Funds by Budget Category, EFAD-350 (the most comprehensive recurrent source of information on military spending).
5. Murray L. Weidenbaum, "Military R & D," Industrial Science and Engineering, April 1959, pp. 28-30.

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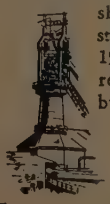
THE BOARD OF DIRECTORS has this day declared a regular quarterly dividend of Fifty-Five Cents (55¢) per share on the capital stock of the Company, payable February 15, 1960 to stockholders of record at the close of business January 15, 1960.

JOHN MILLER, *Secretary*

December 16, 1959

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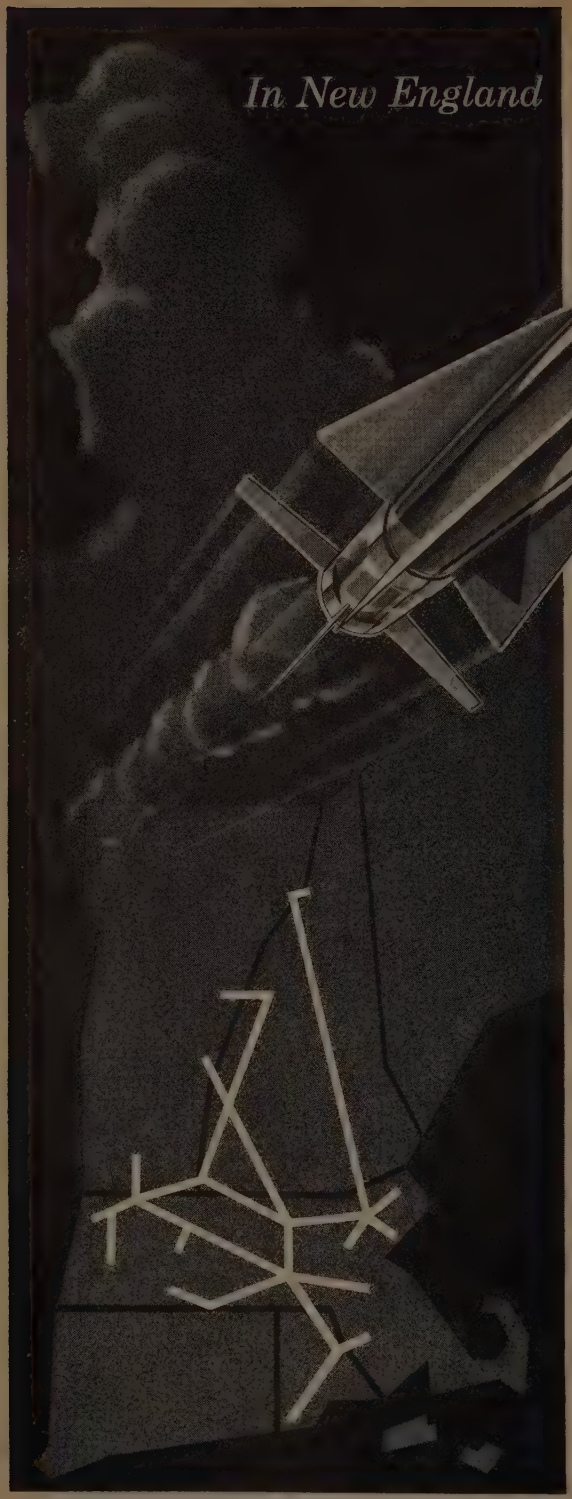
Dividend of $1.75 per share on the Preferred Stock of P. Lorillard Company, which otherwise would be payable on the first business day in January, 1960, by way of anticipation has been declared payable December 18, 1959, to stockholders of record at the close of business December 2, 1959. A regular quarterly dividend of $.50 per share, plus an extra dividend of 20¢ per share, on the outstanding Common Stock of P. Lorillard Company have been declared payable December 18, 1959, to stockholders of record at the close of business December 2, 1959. Checks will be mailed.

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G. O. DAVIES, *Treasurer*

Cigarettes

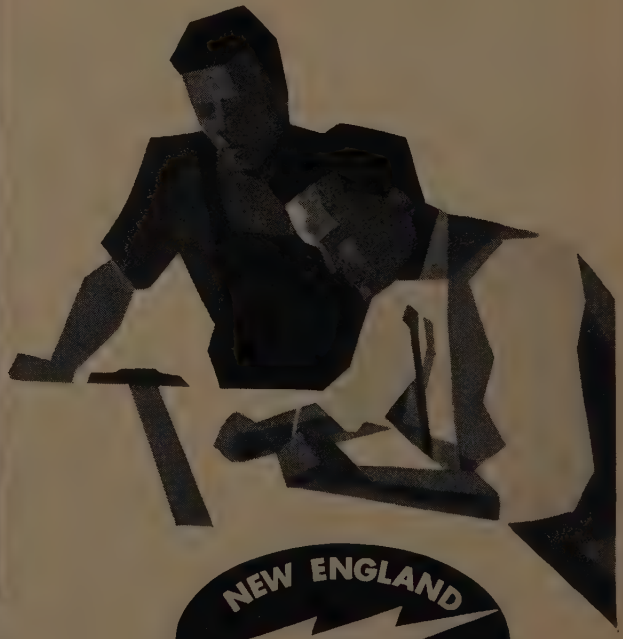
OLD GOLD STRAIGHTS *Regular* *Crush-Proof Box*	KENT *Regular* *King Size* *Crush-Proof Box*	NEWPORT *King Size* *Crush-Proof Box*	SPRING *King Size*
OLD GOLD FILTERS *King Size*			EMBASSY *King Size*
Smoking Tobaccos	*Little Cigars*	*Chewing Tobaccos*	*Turkish Cigarettes*
BRIGGS	BETWEEN THE ACTS	BEECH-NUT	MURAD
UNION LEADER	MADISON	BAGPIPE	HELMAR
FRIENDS		HAVANA BLOSSOM	
INDIA HOUSE			



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Bowling: A Billion Dollar Industry

by B. E. Bensinger

WHEN AN INDUSTRY MOVES at a snail's pace, no one troubles to ask "Can it keep up the pace?" But when an industry grows by leaps and bounds (as bowling has for several years past) people naturally begin to wonder whether the boom can last. This question has been raised occasionally in financial circles during the past two years, and for that matter, a few individuals in the bowling industry itself have voiced uncertainty about bowling's future. To understand this concern—which is not to share it, as I emphatically do not—one has only to take a close look at bowling's phenomenal growth over the years.

While the industry's greatest strides have been made since the advent of television, which helped popularize the game, and the introduction of automation in 1952, the upward surge got underway much earlier. When the American Bowling Congress was established in 1895, its roster of regular, organized bowlers contained a mere 2,000 names. Since there were only 13,000 additional bowlers, playing on a more or less irregular basis, this brought the total bowling population that year to a meager 15,000. But from that time on the bowling ranks have been growing, and growing rapidly. By 1920 approximately a million Americans were bowling; by 1932, five million; by 1943, 16 million; and today, the bowling population numbers an estimated 26½ million, of whom some four and a half million are registered ABC bowlers.

This explosive growth in the number of bowlers—averaging 63% a year over the past four decades—naturally created a burgeoning market for bowling equipment manufacturers. To outfit themselves, this army of bowlers has bought millions of pairs of bowling shoes and mountainous quantities of bowling balls and bags. Moreover, their need for added facilities inspired the establishment of hundreds upon hundreds of new bowling centers across the country; and this, together with the expansion of existing centers, has raised the number of ABC certified lanes from 50,000 to nearly 100,000 within the past decade. The result of this growth is that bowling, including new facilities, game fees, and players' equipment, has now become a *billion dollar industry.*

That's the picture today. But the question, as I indicated earlier, concerns the future. Will tomorrow tell a different story? Is the bowling boom likely to continue? The answer, in my opinion, is yes. And I say this for many reasons.

B. E. Bensinger, president of The Brunswick-Balke-Collender Co., is the great-grandson of John Brunswick, founder of the company in 1845. *A graduate of Yale University, Mr. Bensinger joined Brunswick immediately after getting his degree. He was elected president of Brunswick in* 1950 *and chief executive officer in* 1954.

For Recreation: $41 *Billion*

To start with, let's examine some fundamental factors that have boosted not only bowling, but the recreation market as a whole. The enormous expansion of this market in recent years—one authority has estimated that in 1958 alone Americans spent some $41 billion on recreation—is largely due to the shortening of the work week over the years and the rising disposable income of American families.

And these twin blessings seem certain to be with us for many years to come. Predictions are that by 1970 nearly half of all American families will have after-tax incomes of $7,500 or more, while another 33 per cent —the middle income group—will have incomes between $4,000 and $7,500. Moreover, leisure time is not likely to diminish. The committment to the 35-40 hour work week seems unshakeable, unless, as well may happen, it gives way to the four-day week. All this certainly augurs well for the future of recreation and, of course, of bowling.

GROWTH IN SPORTS

Total U. S. Participation

Category	1946	1956	1966 Estimates
Boating	20,000,000	28,000,000	40,000,000
Fishing	13,100,000	20,813,000	30,000,000
Bowling	**12,500,000**	**20,050,000**	**35,000,000**
Hunting	9,990,000	11,784,000	20,000,000
Basketball	9,000,000	11,000,000	18,000,000
Baseball	5,000,000	7,106,000	12,000,000
Softball	4,700,000	6,675,000	10,000,000
Tennis	4,100,000	6,583,000	8,000,000
Golf	4,300,000	5,100,000	10,000,000
Archery	1,700,000	4,600,000	8,000,000
Skiing	1,400,000	2,180,000	5,000,000
Football	1,500,000	1,725,000	4,000,000
Track and Field	675,000	580,000	2,000,000
Wrestling	150,000	170,000	1,000,000

Another beneficial influence is our fast-growing population. It's been estimated that within the next decade the nation's population will increase by 33-million, bringing the total number of Americans to more than 210-million. Since bowling aficianados are drawn from almost every age group, the bowling industry—along with other recreation industries—is bound to profit greatly from this population upsurge.

Still another recreational stimulus in recent years, and one that seems certain to continue, is the great exodus of Americans from cities to suburbs. Living in the wide open spaces rather than overcrowded cities, many more Americans now have room for boats, swimming pools and tennis courts, and far easier access to

innumerable other sports, bowling among them. For bowling has grown and developed with the suburbs. The availability and relative cheapness of suburban land has made possible the building of scores of bowling centers that never could have been built in the cities. Perhaps the best proof of this is that 50% of all suburban shopping centers now contain bowling centers.

Women Bowlers—10½ Million

In addition to these plus factors which affect the entire recreation industry, there are others that apply solely to bowling. One of these is women. Not too many years ago a woman bowler was a rarity. But as bowling moved from the dingy, dimly-lit "alleys" into modernized, attractively decorated bowling centers, it took on added respectability, and more and more women became devotees of the sport. Today there are approximately 10½-million women bowlers, and tomorrow there are certain to be more. Everything is being done to attract the ladies. Dozens of bowling centers have installed well-staffed nurseries, including built-in wall cribs, and a few have even added closed circuit TV which permits bowlers to keep a parental eye on their children. To stimulate further female interest, my own company recently initiated a country-wide promotion campaign whereby proprietors of bowling establishments were invited to offer free bowling instruction and free bowling to women in their localities.

Enthusiasm for bowling is growing among other groups too. Take junior bowlers. Ten years ago the members of the American Junior Bowling Congress numbered 24,000. By 1955 this number had risen to 94,000 and today it is slightly more than 225,000.

Bowling is also on the upswing in colleges. The Association of College Unions is working closely with physical education leaders on both a national and individual school basis to promote the game, which now has become an inter-collegiate competitive sport in most areas.

Further gains in bowling may also be expected from a wider geographical distribution of the ten-pin game. As rapidly as bowling has grown in recent years, a disproportionate amount of this expansion has taken place in the Mid-and Far West. There still remain large areas of the country—such as New England and the South—where ten-pin bowling has scarcely penetrated at all. Little Rock, Arkansas, for instance, has but 19 lanes; Laredo, Texas only 6; Jackson, Mississippi, 4; and Raleigh, North Carolina, none at all.

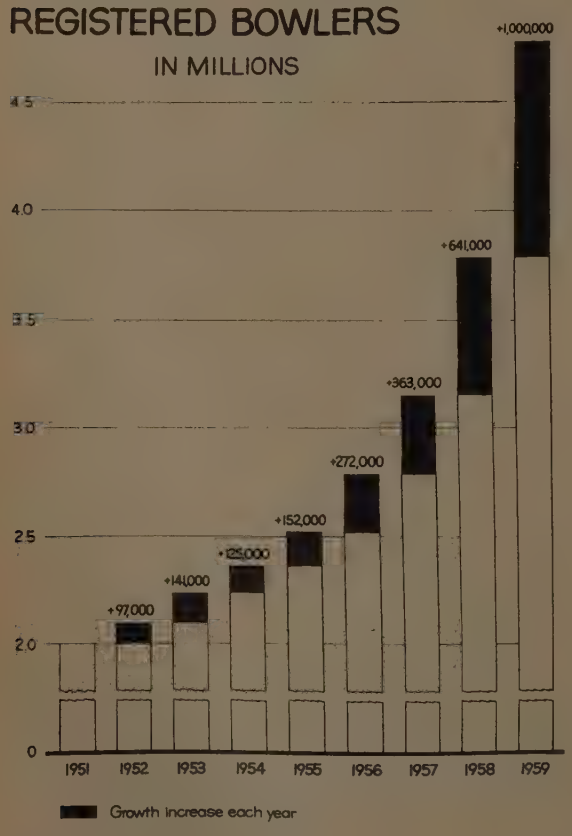
Consider what will happen if the people in these communities—and hundreds of others like them—take to bowling with the same zest as Mid-Westerners. In Chicago, one of the greatest bowling cities in the country, there are 5,829 lanes, a ratio of one lane to 1,075 people. Were bowling to become as popular in Jackson, Mississippi, where the ratio now is one lane to 14,000 people, it would mean that in this one city alone 144 additional lanes would have to be installed, not to mention an identical number of pin-setters, as well as lane and pin sanders, hand chalk, scoresheets and the dozens of other items necessary for bowling centers.

The South Will Rise Again

Responding to vigorous promotion and sales campaigns, bowling has begun to make headway in these potentially large markets. For example, a new ten-pin center, containing 48 lanes, will be opened this spring in Baltimore, Maryland, which to date has been strictly a duck pin area. And this is just one of a series of centers scheduled for this region.

Inroads are also being made in the deep South, with the advent of air conditioning; the southern climate is no longer a deterring factor. Greater Miami, which in 1954 had approximately 30 lanes, now has 415. Texas, Louisiana and South Carolina are other fast growing areas.

The foreign market offers great potential, too. Having observed bowling at some of our military bases abroad, people in other countries have begun to show considerable interest in the game. My own company, for one, is doing much to foster this interest, particularly in the European Common Market countries, the United Kingdom and Scandinavia. And considerable progress is being made. A bowling center has already been constructed in the city of Naples, and work is now underway for the conversion of a movie theatre near



Source: ABC, WIBC, AJBC

The primary firms which manufacture bowling equipment in the United States, in alphabetical order, are: American Hard Rubber Co.; American Machine & Foundry Co.; M. Blatt & Co.; Bowl-Mor Corp.; The Brunswick-Balke-Collender Co.; DBA Products; Ebonite Co.; Hyde Athletic Shoe Co.; Moore Co.; Pierce & Stevens Co.; Raybestos-Manhattan, Inc. (Manhattan Rubber Division); Ripley Bowling Pin Co.; John E. Sjostrom Co.; and Vulcan Corp.

London into a multi-lane bowling center. Other conversions are expected to follow.

To help promote the game in Britain, a new company has been formed by the J. Arthur Rank Organization and American interests. Arrangements have also been completed with a firm in West Germany to produce automatic pinsetters. Another company has been formed in Ireland for the production of bowling items there. Arrangements have also been made for the manufacture and distribution of bowling equipment in Australia.

Bowling interest may have even been sparked in Russia. At the American National Exhibit in Moscow last summer we presented a film of the king of bowling, Don Carter, demonstrating the game. Very possibly it was that which prompted Mr. Khrushchev, on his visit here last September, to ask to watch some bowlers during his tour of Camp David with President Eisenhower.

So far I have written of bowling's future growth solely in terms of recruiting additional bowlers. But that is only one way in which bowling can grow. There's still another. The growth of the industry depends not only on how many people bowl, but how often they play. Of today's 26½-million bowlers, only 4½-million or so are members of organized teams, and therefore play at least three games a week for 35 weeks of the year. This means that there are some 22-million bowlers who can be converted from occasional bowlers to regulars. Since the sponsorship of bowling teams by a multiude of organizations—churches, schools, unions and particularly industry—gains ground every day, it seems certain that the number of registered bowlers will increase sharply in the years ahead.

Certainly we in the industry are doing everything we can to create, and sustain, bowling interest. "Championship Bowling," has been sponsored on a nationwide TV series which has aroused enormous interest in the game. I have already mentioned the recent campaign to attract more women to bowling; and, on a somewhat different level, for the past six years Brunswick has sponsored a bowling management school as a refresher for established bowling proprietors, and as a road map for newcomers. During the school's eight-day sessions, classes covering such subjects as maintenance, insurance, cost of operation, sales promotion, advertising, leagues and community relations, are offered by top company officials as well as big name bowlers. To date, the school has graduated over 3,000 proprietors.

Thus, with the industry taking vigorous steps to promote the game, and with the opening of great new markets, both here and abroad, it seems perfectly clear that the financial outlook for bowling is bright indeed.



BALTIMORE GAS AND ELECTRIC COMPANY

Serving one of America's Great Industrial Centers

QUARTERLY DIVIDENDS

The split of each share of Common Stock into two shares became effective on November 12, 1959, and certificates for the additional shares were mailed to stockholders on November 21, 1959.

Dividends of 25 cents a share on the Common Stock (equivalent to 50 cents a share on the common shares outstanding prior to the split); $1.12½ a share on the 4½% Preferred Stock, Series B; and $1.00 a share on the 4% Preferred Stock, Series C, have been declared for the quarter ending December 31, 1959, all payable January 2, 1960, to holders of record at the close of business on December 15, 1959.

J. THEODORE WOLFE, *President*

Dividends paid on the Common Stock continuously since 1910—always earned—never reduced.

Pullman Incorporated

393rd & 394th Dividends

93rd Consecutive Year of Quarterly Cash Dividends

A quarterly dividend of seventy-five cents (75¢) per share and an extra dividend of one dollar ($1.00) per share will be paid on December 14, 1959, to stockholders of record November 30, 1959.

CHAMP CARRY
President

PS PULLMAN-STANDARD

KELLOGG

TRAILMOBILE

RADIO CORPORATION OF AMERICA

RCA

Dividend Notice

The following dividends have been declared by the Board of Directors:

First Preferred Stock

87½ cents per share on the First Preferred Stock, for the period January 1, 1960 to March 31, 1960, payable April 1, 1960, to stockholders of record at the close of business March 7, 1960.

Common Stock

In addition to a regular quarterly cash dividend of 25 cents per share, a 2 per cent. stock dividend was declared on the Common Stock. The cash dividend is payable January 25, 1960, and the stock dividend February 1, 1960, both to stockholders of record at the close of business December 18, 1959.

ERNEST B. GORIN,
Vice President and Treasurer

New York, N. Y., December 4, 1959

United Gas GROWS with the Gulf South

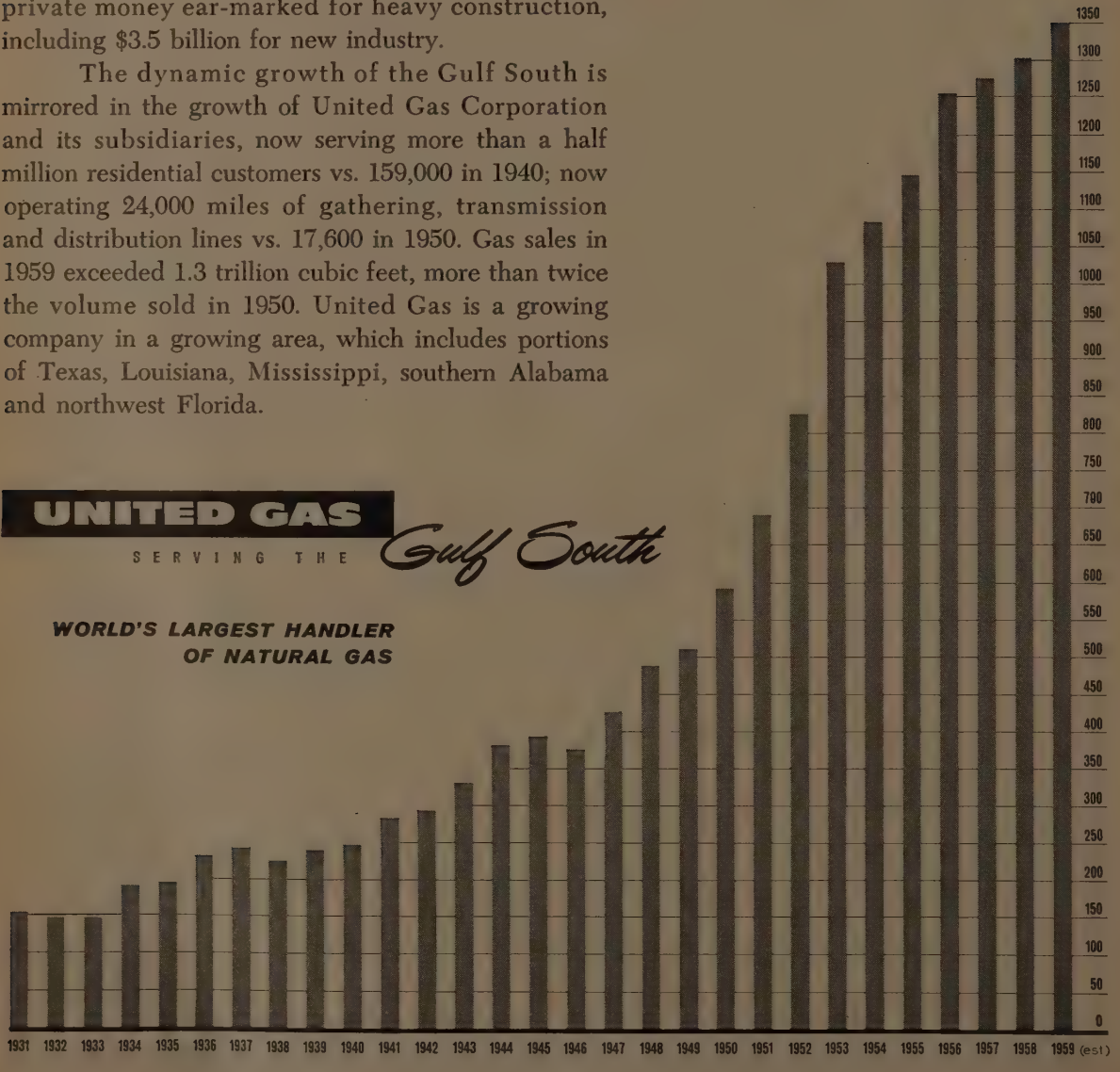
Talk about growth! The Gulf South area served by United Gas boasts a 50% increase in population since 1930; $14.5 billion of private money invested in engineered construction since World War II; $4 billion in industrial buildings alone since 1950. And the end is not in sight. An increase of almost one-fourth in population of the metropolitan areas of the Gulf South expected in the next five years. Another $9 billion of private money ear-marked for heavy construction, including $3.5 billion for new industry.

The dynamic growth of the Gulf South is mirrored in the growth of United Gas Corporation and its subsidiaries, now serving more than a half million residential customers vs. 159,000 in 1940; now operating 24,000 miles of gathering, transmission and distribution lines vs. 17,600 in 1950. Gas sales in 1959 exceeded 1.3 trillion cubic feet, more than twice the volume sold in 1950. United Gas is a growing company in a growing area, which includes portions of Texas, Louisiana, Mississippi, southern Alabama and northwest Florida.

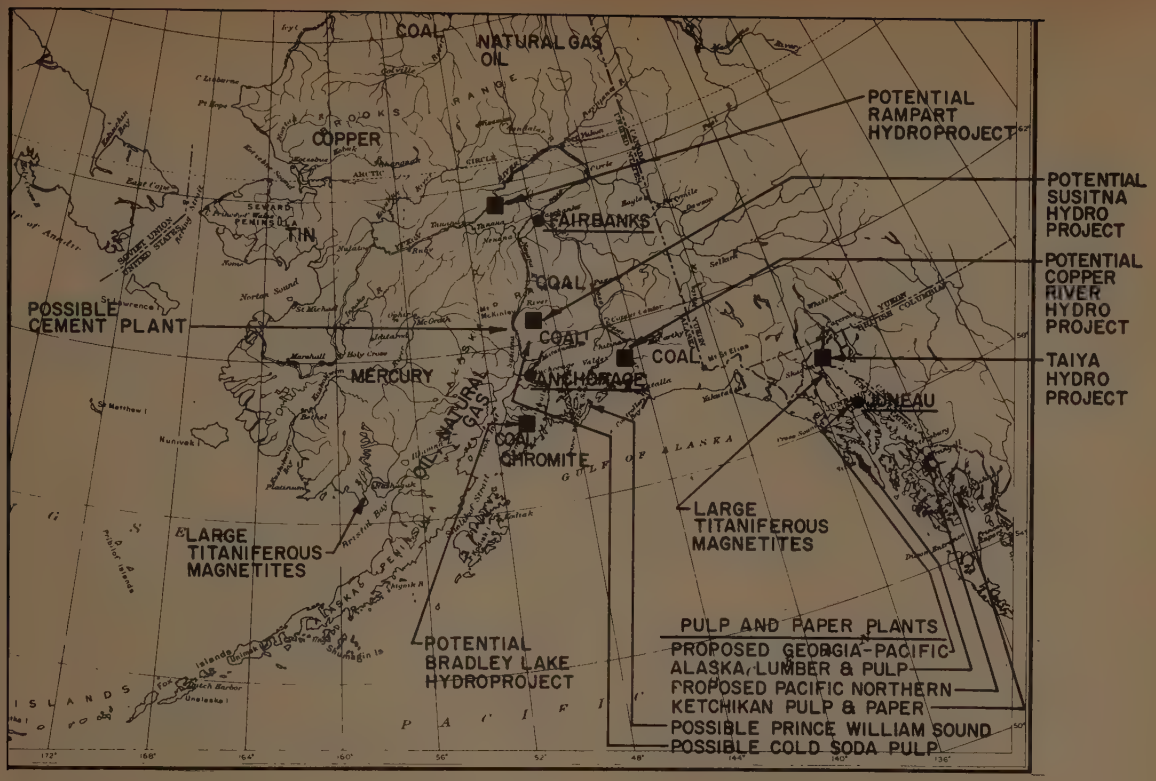
UNITED GAS

SERVING THE *Gulf South*

WORLD'S LARGEST HANDLER OF NATURAL GAS



NATURAL GAS SOLD BY UNITED GAS, 1931-1959, IN BILLIONS OF CUBIC FEET



Alaska: The Economic Outlook

by Ivan Bloch

THE FUTURE PROGRESS OF THE ECONOMY and development of our 49th State is more difficult to chart than that of any other state of the Union. This vast land area of almost 600,000 square miles, with a present population of 220,000 people (of which 50,000 are military personnel), intrigues the imaginative inquirer but baffles the rational Analyst. On the one hand, the lure of the unknown brings visions of vast, untapped resources; on the other, the hard facts of operating life in this last frontier often are discouraging but to the venturesome.

Frontier development, historically, has reflected the same patterns. If the breaching of the West had been left to the arithmetic of its promises, as then visualized by the prudent analyst, one might retrospectively conclude that nothing would have happened: no railroads, no frontier towns, no mineral development, no cutting of timber and plowing of virgin soils. To be sure, the winning of the West—as that yet to be achieved in Alaska—may have been an inefficient process, wasteful of men and capital resources. However, in the balance, the eventual total gains have been immeasurably large.

A realistic, hard-headed appraisal of Alaska's potentials can lead to no assured conclusion of fact. For instance, merely looking at the market potential in terms of less than a quarter of a million population—and that alone — is simple and essentially negative; there are dozens upon dozens of communities in the more developed states which contain that much population within a radius of a very few miles. However, if this population is viewed in terms of its unsatisfied needs for goods and services (relatively isolated from supply by distance and transportation costs), in terms of high standards of living, and in terms of specific and sometimes peculiar needs, the opportunity picture comes into some focus.

As in the fruition of the West, natural resources furnish an important even though not always clearly defined base. Again the pattern for Alaska is repetitive of that historical for the West: early accent on gold and precious metals, leading to exploitation of base metals; opening operations in forests and lands, and drilling of vast areas for oil and gas. However, it is

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Ivan Bloch heads a private industrial and economic consulting practice, under the name of Ivan Bloch & Associates in Portland, Oregon. For the past 20 years he has done economic-industrial analysis work in the Pacific Northwest and Alaska. He has carried on similar work in the Philippines, Jamaica and Chile. Born in Switzerland, Mr. Bloch received his engineering training in the U. S.

necessary to view Alaska in terms of its peculiarities, and less in terms of example which might be sought elsewhere. For Alaska is unique in spite of rationales to the contrary. If it resembles anything familiar, perhaps the northern tier of the other 48 States provide some basis for comparison. Even there, the total picture cannot be assembled from a few similarities.

Alaska's 586,400 square miles (almost 400 million acres, or twice the area of Texas) contain a great variety of climatic and physiographic features which, in some measure, bear upon the nature of development. The Southeastern Panhandle, an archipelago, is mountainous, heavily forested, and has a mild, wet climate. Its tidal sweep, and its fjords have supported fisheries for salmon and other species. The truly enormous forests are feeding pulp and paper plants, with more to come. In this area of scenic beauty—although all of Alaska is breathtaking in its vistas — are located the state's capital city of Juneau, with a population of 10,000, the communities of Ketchikan, Petersburg, Wrangell and Sitka.

The Country's Terrain

The massive land body of Central Alaska itself divides into distinguishable physiographic and climatic units. The Kenai Peninsula and the Cook Inlet areas contain the rugged Kenai and Chugach mountain ranges, with a gently sloping platform of land bordering Cook Inlet itself. Anchorage, Alaska's largest city (100,000) is located in a wide plain area bounded to its south by the Chugach range. North of Anchorage is the vast Susitna river valley, bounded to the north by the Alaska Range. To the East, is the Matanuska Valley, long known for its agricultural lands and development. These areas have a moderate climate, with reasonably cold winters, and warm summers. North of the Alaska range in which are located Mt. McKinley, Foraker and other majestic peaks, is a vast plain in which flow the Yukon, Kuskokwim, the Tanana and their tributaries. Winters are quite cold, with moderate snow fall, and summers are intensely hot.

Fairbanks, Alaska's second largest city, is located in this plain, which is bounded to the north by the Brooks Range which drains into the Arctic Ocean. The Alaska peninsula comprises very large mountain ranges and large lakes. The Aleutian peninsula is composed on an archipelago of relatively barren islands. Although there are forests in most of the central area south of the Arctic Circle, these have not yet been exploited for more than local needs. Mineral activity in this entire area had a boom start with the Alaska gold rush. Today, mining is sporadic and spotty, with the emphasis on coal (of which Alaska is bountiful), sand and gravel. Agriculture, oriented toward local consumption, is concentrated in the Matanuska Valley, near Anchorage, and the Tanana Valley near Fairbanks. Fisheries, a major contributor to Alaska's economy, are operated in Southeast Alaska, the Prince William Sound, the areas around Kodiak Island, Bristol Bay, and other open-sea areas. Salmon, crab and shell fish are principal commercial species.

Transportation to and within Alaska has always been of importance to the development of the state. The air age has been intimately connected with daily activity of every part of Alaska. Ten certificated airlines place the state's communities within easy reach of most cities "outside". It is only a quick 4½ to 5 hours between Seattle and Anchorage and Fairbanks. New York is 14 hours away; Chicago not quite 12 hours; and Los Angeles about 10 hours. With coming jet travel, even these short trips will be substantially reduced in time. In addition, a growing number of world airlines now utilize Anchorage as a hub for transpolar air routes to Europe and the Far East, and Fairbanks is likely to share this position also. The Alaskan has been weaned on the airplane. Outside of numerous certificated airlines serving all sections of Alaska, and ubiquitous charter operations, the number of privately-owned aircraft is greater in Alaska than anywhere else in the world. Air freight moves intra and inter Alaska in enormous, growing quantities.

Waterborne commerce is of extreme importance. The pioneer steamship services of Alaska Steamship Company has been supplemented with numerous tug-barge operations on frequent and scheduled basis from Puget Sound, Columbia river and California coastal points. Good harbors are found in nearly all coastal parts of Alaska. Panhandle communities all have deep-draft harbors. The Prince William Sound area has all-year, deep draft ports at Cordova, Valdez, Seward and Whittier, the last two also serving the Alaska Railroad.

The Port of Anchorage has under construction an $8 million facility for the efficient handling of waterborne cargoes and their transhipment to rail and highway. A port is projected for oil transportation near Kenai on Cook Inlet. Deep-water, all year port facilities also exist at Homer and Seldovia on Kachemak Bay on the Kenai Peninsula, and at Kodiak. Aleutian points and those on the Bering and Arctic coasts have a variety of facilities for the handling of waterborne commerce, but most of those on Arctic waters are only utilizable during summer months, being closed by ice for many months of the year. The Yukon, Kuskokwim and other large rivers to the interior have been traditional routes for shallow-draft water transport.

Roads and Rails Not Plentiful

The Alaska Highway provides the sole overland motor route to and from Alaska. Considerable all-year traffic exists on this highway, including growing truck movements. The portion in Alaska is excellent, whereas the Canadian gravelled section—1,200 miles—remains to be paved. Within the new state are only 5,100 miles of roads, of which about 2,000 are paved. About two-thirds of the total mileage is open to all-year traffic.

No rail facilities exist between Alaska, Canada, and the mainland States. The Pacific Great Eastern system of the British Columbia government extends northward from Vancouver, B. C. for some 600 miles to the Fort Nelson area. Studies are now under way by the U. S. Alaska International Rail and Highway Commission to re-investigate the possibilities of rail system which would

link Alaska with West Coast points. Whether the Pacific Great Eastern, which intersects the transcontinental Canadian National line, 400 miles eastward of Prince Rupert on the Pacific Coast, will be extended further, or whether the Wenner-Gren project on the upper Peace River in northern British Columbia will include a rail link is not yet clear. However, whatever rail route is extended, its Alaskan terminus is most likely to be Fairbanks, the northernmost community served by the Alaska Railroad. This 500 mile Federally-operated and fully modern facility, extends southward from Fairbanks to the Matanuska Valley, to Anchorage and thence to the Prince William all-year ports of Whittier and Seward.

It is on the Alaska Railroad "Railbelt" that most of Alaska's population is concentrated. Fairbanks, about 125 miles south of the Arctic Circle, has a population of around 50,000. Anchorage and its immediate environs has grown from a mere tent city in 1915 to a modern metropolis of some 100,000.

Alaska's communities are modern, with all amenities for communications and entertainment. Most cities have daily and weekly newspapers, some of which surpass in coverage and editorial comment those of similar sized cities in the "smaller states." Anchorage, Fairbanks and Juneau have television stations, several radio broadcasting stations, and movie theaters are found almost everywhere. Alaska is education-conscious, and the major cities have modern school buildings and facilities of outstanding characteristics. The University of Alaska, at College, near Fairbanks, has been growing in the size of its faculty and student registration steadily; and a Methodist College is under construction in Anchorage.

Community college sessions of diverse characteristics are held in other communities of Alaska. Good libraries are also found, and most communities boast of better-than-average amateur theater and musical groups. The Anchorage Music Festival, held each year, has been a magnet for world-famed artists. Civic clubs and organizations abound, and the Alaskan is a devoted member. Churches of nearly all denominations are found in most parts of Alaska. Very few communities, and these are the most isolated and smallest ones, do not have electric power, water and sewerage systems, police and fire departments. The larger cities have modern hospitals, and nearly all of them have medical and nursing services.

INDICES OF ECONOMIC DEVELOPMENT

The population of Alaska has been increasing quite rapidly. From around 70,000 in 1940, the present total is in excess of 220,000, of which around 50,000 are military personnel. During the period 1951-52, a sharp increase of almost 32% in total number of military personnel was accompaned by an increase of close to 15% in civilian population. While the majority of these new civilians are, in theory, only temporary residents brought by the demands for construction workers in military and defense installations (as for the famous DEW line and White Alice projects), a large portion remain to swell what might be termed "stable" or "normal" population. This stable population has been steadily increasing year after year, in spite of the seasonal swings which coincide with construction and resources-based activity.

Although it is very difficult to forecast the possible growth of population of the new state, it is likely to continue at an annual total rate ranging between 6 to 8% (as contrasted to around 1.6% for the U. S.). Thus, in 1975, it is likely that Alaska may contain around 750,000 persons, depending on the tempo of development of certain primary industries and the anticipated rate of decrease in total military personnel.

A characteristic of Alaska's population is its youth. In 1950, the U. S. Census data showed a median age for Alaska of 25.8, whereas that in the United States was 30.1. It appears this disparity continues. Alaska's birthrate per 1000 population has been steadily increasing: from 23.2 in 1945 to 37.0 in 1956, as contrasted to 19.6 and 25.2 respectively for the United States. Similarly, the Alaska death rate has been substantially under that of the United States, and has been dropping even more rapidly each succeeding year.

The youthful character of Alaska's population reflects itself, obviously, in school enrollment in public primary and secondary systems. Excluding students in Alaska Native Service schools, and the few private institutions, in 1940 there were only 6312 enrollments. This has grown in rapid fashion: 13,909 in 1950, and 35,888 in 1957. (*Figure A* "Indices of Development—School Enrollment"). The total assessed valuation of Alaska's school districts in Alaska was slightly under $500 million in 1958.

The rapid growth of population has also been reflected in other increasing indices of community and related development. *Figure B* "Indices of Development — Total Assessed Valuation — Real and Personal Property of Incorporated Towns and Cities" shows the steady growth which has been sustained. Total of 23

Figure A

Alaska School Enrollment

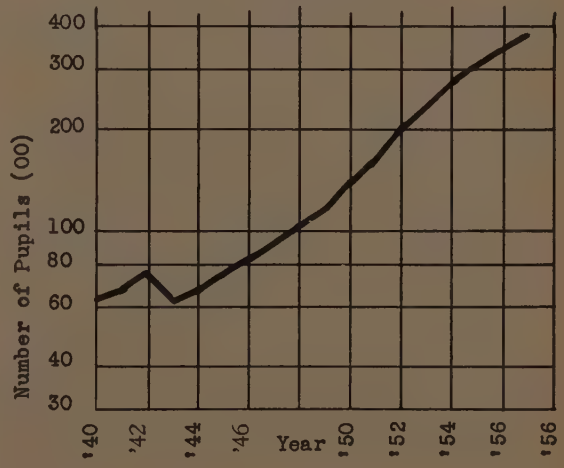


Figure B

Alaska Assessed Valuation
Incorporated Towns & Cities

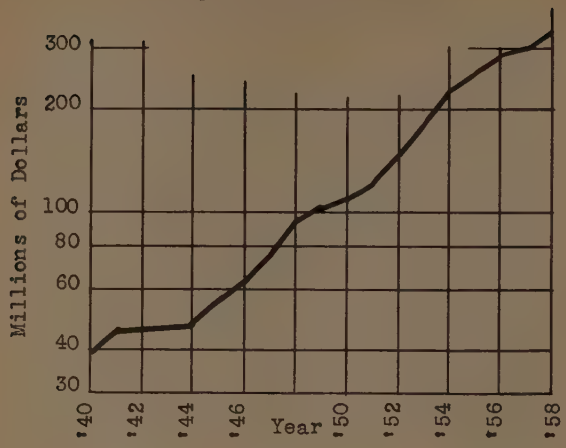


Figure C

Alaska Bonded Indebtedness
Incorporated Towns & Cities

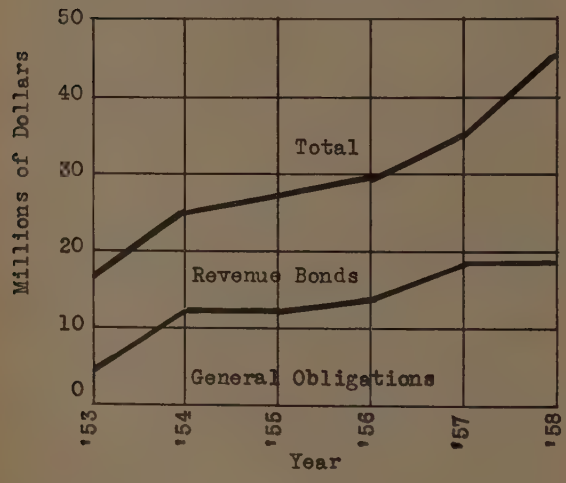
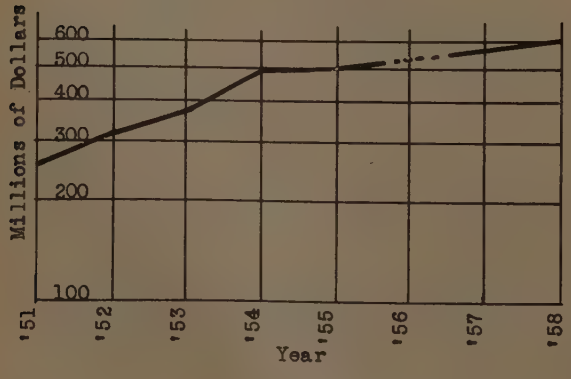


Figure D

Alaska Gross Volume of Business



towns and cities indebtedness has also increased in response to the demand for public services. This is shown in *Figure C* "Indices of Development—Indebtedness", which also indicates proportion between general obligation and revenue bond indebtedness.

It is difficult to indicate the upward changes taking place in the construction of residential and commercial buildings because a great deal of expansion has been taking place on the fringes of city or town limits. However, the annual value of permits issued by incorporated towns and cities in Alaska has remained somewhat steady between a low of $10 million to a high of $12½ million during the period 1954 to 1958 inclusive.

Consistent Rise in Gains Shown

The gross volume of business also has shown consistent upward gains, more than doubling during the past seven years. See *Figure D,* "Indices of Development—Gross Volume of Business." Similarly, banking activity has shown remarkably continuous growth. Another significant index of development is found in the continuing rise in airline passenger and freight transportation inter- and intra-Alaska for certificated airmail carriers.

A few other examples can be cited to demonstrate growth. During the period 1947-1957, the number of passenger automobile registrations increased more than sevenfold, from slightly over 7,000 to almost 50,000. Truck registeries jumped similarly from about 4,000 to over 17,000. Telephone connections (the majority being in the major cities of Anchorage, Fairbanks, Juneau) increased from 11,000 to over 30,000.

The Alaska economy of today is heavily oriented to defense activities. The strategic position of the new state has been reflected in enormous construction military projects: air fields and their bases; radar and communications systems (as indicated before, comprising the DEW line and White Alice projects); naval bases; and more recently, the emergence of ballistic missile detection, interception and launching facilities. Although precise data on defense expenditures and size of personnel are obviously "classified," it is possible to indicate a total defense expenditure of around $800 million for the period 1950-1957. This can be compared to estimates of the production of Alaska's primary industries for the same period of time: fisheries, $676 million; minerals, $190 million; forest products, $116 million; furs, $47 million; agriculture, $25 million, or a total production of $1,054 million.

The predominant position of the defense establishment and its corollary activities is reflected in the pattern of Alaska's employment. Considering military personnel as employed in a primary industry with a total of 64,100, about 47,000 are in military categories and only 17,100 in construction, mining, lumber and pulp, hunting and fishing, food processing and other primary manufacturing. Most of the 5,863 employed in construction are directly related to military activity. (These data representing reported monthly average employment for 1957.) *See Table I* "Monthly Average Employment."

Table I

1957 Alaska Employment—Monthly Average Employment

		% Total Employment
I. Primary Industry		
Military	47,000	42.7
Construction	5,863	5.3
Fishing	4,200	3.8
Salmon canning	2,624	2.4
Mining	1,290	1.2
Hunting, trapping	1,000	0.9
Lumber, wood products	696	0.6
Pulp	649	0.6
Printing and publishing	299	0.3
Other Manufacturing	289	0.3
Food processing (ex salmon)	229	0.2
Total	64,139	58.2
II. Secondary Industry		
Federal government	17,400	15.8
Trade and services	11,954	10.9
Misc. self-employed	8,600	7.8
Transportation and utilities	5,079	4.6
Territorial and local government	3,000	2.7
Total	46,033	41.8
Total Employment:	110,172	100.0

Source: Adapted from data of Alaska Employment Security Commission.

The service industry pattern in Alaska reflects clearly the impact of the defense establishment. Of the 46,030 employed in service industries, a large portion of the 17,000 Federal employees (exclusive of military personnel) are closely related to defense activities and their administration. Obviously, even much of the remaining employment indirectly reflects defense activity because the need for their services is generated by the presence of defense workers.

The dependence of Alaska's economy on defense considerations has always been a matter of considerable discussion in attempts to visualize the state's future development. The pessimistic view such an economy as tenuous and pose the question "What would happen if the military were to pull out of Alaska?" Those contrary-minded scoff that Alaska's position in world strategy is too important to admit that such a possibility is remotely in sight. The fact remains that each shift in defense technology has caused heavy activity in Alaska, with consequently high rates of expenditures for construction and the establishment of ancilliary facilities. Even though there are shifts in the types of defense establishment (such as entailing lesser dollar-value expenditures for the construction of facilities but greater values in the types of equipment established), it can be argued that the net effect on the total economy will remain on a sort of plateau, i.e., that if there are reductions in the value of direct military construction, the shift to highly expert and trained technologists to man the new installations will result in the construction of better housing and related facilities and the employment of higher-income personnel.

One is impressed, however, with the general observation that the pattern of Alaska's development is somewhat similar to that which historically took place in the early days of the Western frontier. The establishment of military outposts and garrisons in the 1800's was soon followed by the development of rudimentary service economies, and the rapid exploitation of neighboring natural resources. So in Alaska, the defense economy base has stimulated and enhanced the growth of ancillary primary and service industries. The solidification of this peculiar type of economy is evident by the very impressive construction, especially during the past ten years, of fine homes in major communities, of modern office buildings and other commercial facilities, in the establishment and expansion of major community civic improvements as streets, ports, water supply and sewerage systems, of electric power facilities, etc.

Even though much of Alaska's economy might be characterized as "taking each other's washing," consolidation and diversification is becoming increasingly evident. A non-defense oriented economic base is taking shape, principally (and again following traditional patterns of Western expansion) in the field of natural resources development, supplemented by the exploitation of Alaska's global transportation position and the expansion of its service establishments.

RESOURCES DEVELOPMENT

It is easy to talk of Alaska's "vast, untapped resources" but it is not so simple to be precise as to their elements for potential development. This is particularly true with regard to most of its minerals which, although very varied as to their kinds, are widely scattered throughout the immense area of the State, and more usually than not, isolated from consumptive markets by rugged terrain and long distances. If one could generalize as to the controlling elements of resources exploitation in Alaska, one might summarize the situation somewhat as follows:

1. Present local markets (i.e., oriented to Alaska's population and its demands) can support small units of production in agriculture, some construction materials, and in fuels and electric power.

2. Markets along the U. S. West Coast and elsewhere in the other States are and will be shaped by the uniqueness of the specific Alaskan resource, and the economics of its location (i.e., with regard to lowest cost transportation).

3. The natural resources requirements of Japan and perhaps other Far Eastern nations present an unusual opportunity for Alaskan resources development.

4. The strategic world location of Alaska with regard to trans-Polar air and sea—and even possibly overland —routes may have profound eventual implications on its development of fuel resources.

Outside of fisheries (which are plagued with vexing problems of resources management), the forests of Alaska are the present source of major-scale resources development.

The Panhandle of Alaska contains an enormous coniferous forest, composed of western hemlock, Sitka

spruce, western red cedar. It has been estimated to have around 83,000 MM fbm of merchantable timber. The Alaska Gulf Coastal area's forest of somewhat similar species has an estimated 6,400 MM fbm of merchantable timber. The area around Anchorage (excluding the Kenai Peninsula) contains extensive stands of birch, cottonwood with some western spruce; rough estimates place this resource's merchantable timber at 45,000 MM fbm. The vast interior (including the Fairbanks area, and a major portion of the Yukon and Kuskokwim drainages) is estimated to have around 135,000 MM fbm of merchantable timber in white spruce and white birch.

Today the vast forest resources of Southeastern Alaska are being exploited for large scale production of pulp products. Fundamental to this development has been the policy of the U. S. Forest Service which has divided the total resources into four geographical areas from which timber cutting is restricted to sustained yield practices, thus providing sources of supply in perpetuity to utilizing pulp and paper operations.

At Ketchikan, the Ketchikan Pulp Company (a joint operation of Puget Sound Pulp and Timber Co. and the American Viscose Corp.) has been producing rayon-grade dissolving pulp since the establishment of its plant operations in 1952. Production capacity has been increased in steps to what probably may be the allowable amount for sustained yield operations or 600 tons per day. At Sitka, the Alaska Lumber and Pulp Co. Inc. has just started the operations of its 400 ton per day (maximum design capacity) high alpha cellulose pulp plant. This chemical pulp plant is the operating arm of the Japanese Alaska Pulp Co. Ltd. of Tokyo whose stockholders include major Japanese rayon and paper concerns. About a fourth of the $55 million dollar plant has been financed by U. S. investors, the rest by Japanese.

Another sustained-yield unit has been awarded, on a preliminary permit on which a final decision is slated very soon, to the Georgia-Pacific Alaska Company. The unit is estimated to support a newsprint capacity ranging from 500 to 750 tons per day. Possible plant location would be generally in the Juneau-Douglas area.

Still another sustained-yield unit is under beginning exploitation by the Pacific Northern Timber Co. (composed of Pacific Northwest interests). The Forest Service permit for this operation specifies an initial 100 ton per day sawmill and an eventual sulphite pulp newsprint mill having a capacity of some 100 tons per day.

Thus, the scale of forest industry development in Alaska is likely to continue to be of major proportions. The four sustained yield units in Southeastern Alaska, as noted, will support four full-scale pulp, paper and newsprint operations. The Prince William Sound is likely to be the eventual location of similar operations, although logistics of timber operations are somewhat more involved than those of Southeastern Alaska. In the Cook Inlet area, of which Anchorage may be considered the epicenter, are vast resources of birch and other deciduous woods which appear suitable for the production of specialty pulp as utilized for admixture in the production of toilet tissues and container board. Some reconnaissance studies have been made of these possibilities.

It appears there would be merit in an integrated total operation which would provide for clear-cut logging (preferably during the cold season of the year at which time logging and hauling operations could be accomplished over frozen ground, obviating the need for the construction of expensive roads); the providing of land clearing for agricultural expansion; the culling of higher quality and high-priced logs for the veneer and furniture stock industry of the West Coast; and the production of pulp by such as the cold-soda process (semi-chemical).

Agricultural Development

In contrast to the development of the Alaskan forest industry which is oriented to consumer demands of the United States and Japan, the rendition of value from Alaska's agricultural lands rests upon the needs of local population for certain food products which these lands are capable of producing. Developed agricultural lands of Alaska are located in small amounts in the Panhandle (as around Juneau, for example), in the Matanuska Valley and Kenai Peninsula near Anchorage, and the Tanana Valley in which Fairbanks is located. Of a total of around 3,000,000 acres believed to be suitable in all of Alaska for agriculture by virtue of soil characteristics and climatic conditions, only about 20,000 acres are now under cultivation. The intensity of the short growing season (long hours of warm sunshine) make possible very high yields of such as root crops (potatoes, carrots, turnips and beets), leafy vegetables as cabbage and broccoli in the Matanuska Valley; various cereal crops as wheat, barley, rye in the Tanana Valley. Dairying activity is particularly well established in the Matanuska Valley. Kodiak and some portions of the Aleutians are noted for the initial production of some beef and sheep. The products of this agricultural activity are consumed locally and in 1957 were valued at slightly under $5 million.

Excellent agricultural research facilities of the Agricultural Extension Service are being used constantly to improve agronomic practices and strains of species particularly adapted to sub-arctic and arctic growing conditions. Mechanization of farms, especially dairy and poultry, is rapidly on the ascendancy and includes, for instance, drying facilities for forage and grain. There is much interest in the development of sprinkler irrigation to increase the effective length of the growing season. A moderate food processing industry has developed involving modern dairies, and the production of potato chips.

Local markets for agricultural commodities are many times greater than present production. The problems for achieving greater balance between production and consumption are diverse: the greatest handicap has been the serious lack of farm credit facilities although statehood is likely to alleviate somewhat this situation. The winning of land is expensive: the clearing of forest

and brush cover from lands otherwise suited for agriculture has been accomplished on a piece-meal basis, at very high per acre costs. In this regard, possible large scale land preparation will undoubtedly gather momentum, as for instance might be visualized in the environs of the Matanuska Valley in conjunction with the securing of hardwood pulp woods, as previously noted in this analysis. Operating costs are not so very much higher than those obtaining in the Puget Sound area. Transportation costs on agricultural products provide both a curse and a blessing: on the one hand, the price of certain feeds, of fertilizer and weedicides are high; on the other, freight rates on food commodities from the rest of the United States offer an "umbrella" for the local Alaskan producer.

Livestock and Dairy on the Rise

There are some eventual possibilities in a better integration of Alaska's basic agricultural production. The Tanana Valley's natural advantages for grain production, for example, may be utilized toward the providing of local feed stuff for a growing livestock and dairy industry in the Matanuska Valley. Further, in the possible, eventual Alaskan establishment of some agricultural chemical production as a by-product of oil, gas and coal processing, the Alaskan agriculturist may be the beneficiary of some reduced prices on these essential commodities. This is, however, somewhat speculative at this time.

Although certain mineral resources are known to exist in substantial quantities, the vastness of the new State as yet obscures their extent. It is probable that with the extension of roads and highways, and a greater degree of continuous exploration—utilizing modern geophysical methods—important new discoveries may be made of commercial minerals. One must remark, however, that Alaska has been extensively examined geologically, and that the known variety of minerals occurrences does not necessarily connote commercial quantities.

The gold mining industry of Alaska, in past years, was a major activity. However, of total 1957 mineral production of close to $30 million, sand and gravel, and coal mining now account for equally important values of production, and mercury ranks among major contributors to total value. At the present time, interest is high in titaniferous magnetite, low-grade nickel and copper in Southeastern Alaska. Chrome ore mining in the Seldovia area of Kenai Peninsula has halted due to the discontinuance of the Federal stockpiling of domestic chrome and concentrates. Mercury continues to be important in the lower Kuskokwim basin. A very large occurrence of titaniferous magnetite has been rumored near Dillingham on Bristol Bay. Platinum continues to be mined on Bristol Bay. In the Kobuk river drainage, near Kotzebue, copper resources are being actively explored. Similarly, major exploration is underway in most of western Alaska for a number of metallic minerals.

Best known of Alaska's mineral resources, and which sustain substantial production year after year are its coal reserves. Active mining operations to supply the domestic, civilian, and military requirements of the Anchorage and Fairbanks areas are located in the Matanuska Valley and in the Healy Creek (Nenana) coal fields on the Alaska Railroad. However, there are many potential fields which are in various stages of current exploration for possible major production. These include the Bering River area (on the Gulf of Alaska, east of the Copper River delta); the Beluga coal fields on the north shore of Cook inlet to the west of Anchorage. There are also fields near Homer on the Kenai Peninsula, and tremendous reserves along the Arctic Ocean.

Coal Mining Important

The processing of Alaska's major coal resources (estimated substantially in excess of 100 billion tons) offers some interesting, but as yet speculative avenues of approach. For example, the scale of coal mining in the Nenana coal fields about 100 miles south of Fairbanks on the Alaska Railroad is likely to range between 500,000 to 750,000 tons in the foreseeable future. This sub-bituminous C coal is high in volatiles, which in a low-temperature drying-carbonization-tar recovery processing operation might yield saleable products. First, a dry char would have existing markets for steam-power plant operations in the Fairbanks and Anchorage areas, and to a lesser degree, for domestic consumption. The tar liquids conceivably could be treated for the production of high-quality metallurgical carbon (for which substantial and growing markets exist on the West Coast and in Pacific Basin nations), of tar pitches suitable for electrode production in the West Coast and Pacific Basin aluminum reduction industry, light oils, jet fuel and gasolines for domestic markets in the railroad belt. Whether other chemical hydrocarbons could be produced economically is somewhat questionable at least for some years in the future. Possible production of tars for road surfacing, and of creosote for Alaskan requirements warrant consideration as part of a coal-processing complex. The work being done on Texas lignite slag, as a mix for asphalt mix paving material, might reveal potentials for the by-product use of Alaskan lignites. It should be noted that asphalt is now brought into Alaska, and that a creosoting plant is announced of establishment at Whittier on Prince William Sound.

Investigations continue on the Bering River coals (including coking coal measures), by interests presumably having substantial ties with Japanese industry. An initial program of field investigation has begun on the Beluga fields on the north shore of Cook inlet, some 40 miles west of Anchorage. Whether these coals might be suitable for a coal treatment complex is not determinable at this time. The vast Arctic coal reserves may become important to world markets if the proposed harbor on the Arctic Ocean to be constructed through the use of nuclear explosives (Operations Plowshare) becomes reality.

In the field of metallic mineral resources, most interesting at this time are the possibilities of exploitation

of titaniferous magnetites, especially in Southeastern Alaska. Investigations of the Klukwan deposit near Haines has been underway by a number of interests notably by a subsidiary of U. S. Steel. Considerable work is also being done in the Snettisham area to the South. At this juncture, it would appear that electric furnacing of these complex iron ores is likely to be desirable. This places emphasis on hydro-electric development of such as the Taiya project and a number of smaller ones which are discussed further on.

With regard to low-grade nickel ores of Southeastern Alaska, (although recent discoveries show some relatively high-grade occurrences) it is too early to indicate what scale of development might be eventually possible. Some of the ores are sufficiently high in sulphides to warrant some speculation as for by-production of sulfur chemicals which might be linked into pulp and paper production. Iron pyrites, and other sulfur-bearing minerals, in Southeastern Alaska and in the Gulf of Alaska area, might similarly provide sources of sulfur derivatives.

Hunt Continues for Other Metals

The hunt for copper, cobalt and other metallics continues in many parts of Alaska but appears to be intensified in Western Alaska and on the Arctic Coast. There again, it is speculative as to when actual development might take place and in what form.

From time to time, there has been consideration of an electric furnace operation on the Kenai Peninsula in the Seldovia-Homer area for the production of ferrochrome, (from the area's metallurgical grade reserves), possibly ferro silicon and calcium carbide.

Non-metallics have had their share of consideration. Alaska does not yet produce its own source of cement. Consumption is probably due for increases for a variety of usages: roads and road structures, increased tempo of commercial building, etc. The total market for several years has been on the order of 300,000 to 400,000 barrels, which, in terms of standard U. S. practice, is very small to sustain a minimum economic plant operation. However, interest continues in the possible establishment of a cement plant almost midway between Anchorage and Fairbanks on the Alaska Railroad. The limestones of the Foggy Pass area appear to be suitable for cement production, and all other materials are available in suitable quantities of acceptable quality save gypsum, the minor requirements for which would have to be shipped to Alaska. There are a number of existing concrete products plants in the Railroad belt at Anchorage and Fairbanks, including a newly established prestressed concrete products plant. Renewed interest is also evident in the utilization of expanding shales for light weight concrete aggregate and products.

Of greatest interest in very recent years has been the discovery of what appear to be commercial quantities of oil and possibly natural gas in certain areas of Alaska. Geological authorities deem a large portion of Alaska as "including rocks that theoretically could contain oil deposits." Exploration and land leasing have been at fever-pitch during the past five years, in such as the Kenai Peninsula, the Alaskan Peninsula and Bristol Bay areas, along portions of Prince William Sound, in the enormous interior areas of the Yukon and Kuskokwim basins, and north of the Brooks range along the Arctic drainages beyond the Arctic Circle. In common with oil and gas exploration, speculation has moved through cycles of extreme optimism, rank discouragement, and again back to considerable hopes that producing areas can be found.

At this writing, it appears reasonably certain that a commercial field has been located in the Kenai Peninsula area not very far from Anchorage. The first producing well was drilled by Richfield in 1957 which shortly thereafter was joined in partnership for the purpose by Standard Oil Co. of California. Although a number of disappointing wells were drilled, the total of three producing wells was swelled by a fourth during October 1959, the latter having a maximum capacity of 1500 barrels per day. Because of the total capacity of these producing wells, California Standard has announced plans for early construction—possibly in 1960—of a $4 million 8-inch pipeline, from the field to a $3 million port at Nikiski on Cook Inlet for storage and tanker loading. Under present marketing conditions, officials of California Standard have expressed belief the Kenai field could compete with foreign oils at West Coast refineries and Japanese markets. Whether a refinery will be established on the Kenai Peninsula is not assured but it appears logical that plans for such would at least include production of motor fuels and light oils for the domestic Alaskan market.

The Alaskan oil situation has brought forth activity in exploration and drilling by virtually every major company and many others. California Standard, Richfield, Phillips, Humble, Union of California, Ohio, Sunray Mid-Continent, General Petroleum, Shell, and many others have established exploratory operations in many sections of the state. Similarly, geophysical exploration companies, drilling, and various other types of supporting firms have established quarters in major communities of Central, Western and Northern Alaska. It is estimated that in Anchorage alone, these activities have brought forth a payroll of at least $3.5 million a year. The possibilities of expansion are highlighted by the recent announcement by California Standard that it will drill additional wells in the Kenai Peninsula and continue exploration at a total cost for 1960 of $3 million. Similarly, late in the Fall of 1959, Richfield received approval by the Federal government for a major exploration program for oil and gas over approximately 1 million acres in the Katalla-Yakataga area on the Gulf of Alaska.

Oil May Also Be Off-Shore

Because petroleum geologists are of the belief that off-shore areas may hold particularly abundant oil reserves, the state's first oil lease sale of off-shore lands in early December of 1959, on the Gulf of Alaska, is causing much activity by oil companies for the opening of additional tideland areas in the State.

Natural gas reserves are also the scene of considerable exploration and drilling activity. Definitive statements as to possible reserves, and commercial quantities have not yet been made by responsible oil companies. However, Union has entered into a contract with the Anchorage Natural Gas Company which obtained a distribution franchise in Anchorage in the fall of 1959. This would necessitate a pipeline from the Kenai fields to Anchorage, a distance of 100 miles. Other potential fields extend along the Cook Inlet and the upper Matanuska and lower Susitna valleys near Anchorage, and in the far reaches of the Arctic Slopes several hundreds of miles north of Fairbanks.

There has been considerable speculation with regard to the establishment of petrochemical industries in Alaska based on prospective natural gas and oil production. If such chemical units become feasible, it is most likely that these will be oriented with regard to Japanese markets principally, with local and West Coast outlets depending on competitive factors which as yet cannot be stated with certainty.

The resources briefly outlined in the foregoing are exhaustible in nature. By comparison, Alaska's hydroelectric potential from its lakes and streams is inexhaustible. Various estimates have been made regarding this potential. Most informed sources indicate a possible development of at least 20 million kilowatts of installed capacity. Development to date has been meager, and in relatively small sites such as Eklutna (30,000 kilowatts) of the U. S. Bureau of Reclamation near Anchorage, Cooper Lake (15,000 kilowatts under final stages of construction) by the Chugach Electric Association of Anchorage, and numerous smaller plants in Southeastern Alaska.

Other smaller projects are in various stages of investigation and planning. Bradley Lake, on Kenai Peninsula, with a possible capacity of 30,000 kilowatts would be capable of producing very low cost electrical energy in the range of 2 to 4 mills per kilowatt-hour. The Susitna river projects (especially Devils Canyon with an initial capacity of 250,000 kilowatts) would be especially well situated to supply the growing Greater Anchorage area. In Southeast Alaska, the Snettisham project—a combination of river and lake development —is in final stages of investigation for as much as 100,000 kilowatts. This project is particularly important as its power supply would undoubtedly add to the feasibility of a pulp and paper operation by Georgia Pacific Alaska in the Juneau area, and possible electric furnacing of titaniferous iron ores in the Snettisham area itself.

Some truly giant projects have been under various stages of preliminary investigation throughout Alaska. One of the most impressive in terms of potential capacity at very low cost per kilowatt-hour is the Taiya project near Haines. This would involve the diversion of headwaters of the Yukon river in Canada to a power plant with a capacity of around 2 million kilowatts in coastal Alaska. Another enormous project entails two dams on the Copper River. The Wood Canyon and Peninsula Projects would also have a possible capacity of 2 million kilowatts. However, the largest of all entails a tremendous dam and a reservoir having an area surpassing that of Lake Erie on the Yukon river, some 120 miles northwest of Fairbanks. The Rampart project, on which initial studies are to begin, would have a generating capacity well in excess of 4 million kilowatts. These very large projects, ranking among the world's biggest, will require many years for investigation, engineering and eventual construction.

Hydroelectrical Projects

The importance of these large hydroelectric projects becomes clear if the power requirements of national electroprocess industries are examined. These industries, such as for the production of aluminum and other light metals, ferroalloys, and a host of important chemicals such as chlorine and caustic soda, are expanding more rapidly than other segments of national industry. By consequence, their power requirements for huge blocks of continuous and low-cost power are also increasing very rapidly. There are few locations in the United States where reliable power supplies of quantity and price suitable for these industries will be found during the next decade. The aluminum industry alone will be seeking some two million kilowatts of new power supplies well before the end of the next ten years. Thus, by the time the major Alaskan projects are constructed and in operation, it appears quite clear that their output will be required by national electroprocess industries, establishing major plants at deep-water location in Southeastern Alaska, in the Prince William Sound and the Cook Inlet area.

As part of the scheme of development of such projects as Rampart, Wood Canyon and others in Central Alaska, examination is being made of the possibility of an enormous very high voltage and high capacity interconnecting transmission network. It is not entirely beyond the realm of possibility, one or two decades away, that this network might be extended overland to tap and interconnect with the similarly enormous hydroelectric resources of the Yukon Territory, Northern British Columbia (including the proposed Wenner-Gren development of the Peace river and its tributaries), and the Columbia river system in Canada and the United States.

In the cursory sketch of natural resources development discussed in the foregoing, it becomes apparent that these will entail extremely large sums of money. Both public and private funds will have to be utilized. In power development, to date, with one or two very minor exceptions, financing has been accomplished either through the issuance of municipal revenue bonds or through loans to local rural electric cooperative associations by the U. S. Rural Electrification Administration. The very large hydroelectric projects will require very long-term financing at lowest interest rates. Presumably these can be financed only by the Federal government on traditional repayment bases. Private power development has made no progress in Alaska to

this time. Oil and gas exploitation, as well as that for coal and other mineral resources, has been largely by private means save for some basic exploration by Federal and formerly Territorial, now State, agencies.

The place of the Japanese market, and of Japanese-based investment has been alluded to in prior discussion. The interest of Japan in Alaska is extremely active, and the Alaskans view Japan as a major market opportunity. As a consequence, planning for industrial production or for industrial sales must give weight to this situation. Japan's interest in tapping Alaska's resources is already evidenced by the establishment of the Sitka cellulose pulp operation. Similarly, Japanese geologists and engineers are steadfestly exploring other resources, notably coal and oil.

Other states of the West Coast may share in Alaska's resources potentials. The extremely pure limestones of southeastern Alaska have recurrently been the subject of exploration with the ultimate objective of shipment to West Coast chemical industry plants. By the same token, magnesia-pulp barge movements from the San Francisco Bay area to Southeastern Alaska pulp operations are being actively explored. Pulp shipments from Ketchikan to West Coast points already have been established. In the event the coals of such as the Alaska Railbelt-Cook Inlet area were processed to tars, pitches, high-purity carbon and various hydrocarbon chemicals, a major portion of the production would be consumed in West Coast tidewater industrial establishments.

MANUFACTURING, SERVICE DEVELOPMENT

In contrast to resources development which appears potentially important for national and world markets, except as specifically indicated in the foregoing as for agriculture, the development of manufacturing in Alaska can be viewed in terms of meeting local needs. As pointed out, the total present Alaskan consuming market is measured in terms of its present population of 220,000, and its estimated growth to 750,000 by 1975. Of this total market, about two thirds is in the Railroad Belt including the cities of Anchorage and Fairbanks and their environs. Even if one modifies the estimate in terms of high personal income, the total purchasing power is still quite small as compared with even moderately sized communities in the rest of the United States. However, and this is the difference which bears consideration, the Alaska market is a "captive" of distance and high transportation costs and isolated from competitive producing centers of manufactured products.

A number of already established manufacturing operations in Alaska which, under "normal" conditions, would find it impossible to survive are evidence of the opportunities created by the distance factors. These include plants for concrete products (even though cement is imported from the Puget Sound and other areas at relatively high costs), units producing industrial gases, one operation manufacturing a number of household bleaches, waxes, and starches, and others. A manufacturing plant is to produce reinforcing bar from the electric furnace melting of local scrap. The Alaska entrepreneur is constantly seeking such opportunities in which the umbrella of freight rates appears to provide a reasonable chance for survival in enterprises which often are less than marginal. To be sure, the rate of mortality in many such ventures has been fairly high; however, for almost every case of failure the first time, there emerges another venturesome group ready to pick up the pieces at depreciated cost for another try.

The listing of small manufacturing opportunities which either now exist or will become more "feasible" —a term used here with emphasis on relativity—as population increases, can be impressive. However, each instance must be examined with considerable familiarity with the peculiarities of the Alaska scene and its unique economics. The investment requirements are usually quite small.

A recent analysis of Alaska's markets* provides some clues as to the place which service industries can occupy in the new State. As compared to the 48 other mainland states, Alaska's per capita buying power is 56% higher, with per household effective buying income almost 12% higher. Further, it is shown that total retail sales per household are 26% higher than in the other 48 mainland states, with food sales per household some 28% higher, and sales in drinking and eating places 127% higher. General merchandise sales per household were shown to be 35% and apparel sales 33% higher.

Although at first glance Alaska's major communities appear to have an adequate number of service establishments, including department stores and shopping centers for instance, there is room for expansion and diversification. In 1954, data of the U. S. Census of Business on Retail Trade (which have been adapted as follows) show some interesting comparisons in degree of relative development. *See Table II.*

Table II

Number of Employees in Commercial Establishments Compared to Total Population U. S. and Alaska—1954

Retail Trade	Number of Employees	Population	Employees per Thousand Population
United States	7,124,331	161,183,000	44
Alaska	4,868	208,000	23
Wholesale Trade			
United States	2,590,236	161,183,000	16
Alaska	981	208,000	5
Selected Services			
United States	2,360,741	161,183,000	15
Alaska	1,576	208,000	8

It is likely that the gap between the "norm" for the United States and Alaska, since 1954, has somewhat narrowed. However, there are yet many fields of service industry activity which either have not yet been

*Adapted from "Sales Management", pages 50-52, August 1, 1958.

developed or which could be expanded and diversified. These include personal services and consequent requirements for office equipment and supplies, and a wide variety of specialized building structures including additional warehousing, repair and servicing centers for all types of equipment, wholesale supplies for such as the oil industry. For example, only recently was a title insurance company established in Alaska. The examples can be multiplied by judicious analysis in major communities of the new State.

More Tourist Accommodations Needed

One vast area of growing importance entails the outstanding recreational assets of Alaska. The superlative grandeur of Alaska's scenic vistas, its almost unlimited opportunities for all types of outdoor recreation have been well publicized. However, and candor must prevail, the size and characteristics of accommodations and facilities do not begin to be adequate for the tourist potential at hand. This does not imply there are no good facilities in Alaska; on the contrary, some of the hotels and motels (including some now under construction) are comparable to better ones "outside." The fact remains that the number and location are inadequate, and until more attention is given to the problem, the full recreational potential of Alaska will remain dormant. It has been said, by apologists for the situation, that the seasonal character of Alaska's recreational potential presents an insurmountable obstacle to full development. Actually, no serious attempts have yet been made to develop the year-round opportunities, ranging from the full gamut of winter sports (including cross country skiing, dog sledding with well organized hut and lodge facilities), of hiking, mountain climbing and camping, of fishing and hunting and wild-life observation.

Outside of the center of major communities such as Anchorage, Fairbanks and Juneau, very little development has occurred of recreational facilities to cater not only to the distant traveler but even for the local population. Some excellent starts have begun in this direction such as the fishing facilities on the Alaska Peninsula by Northern Consolidated Airlines and the recent start of construction of a ski tow near Anchorage which will include a 5700 foot life chair having a 2300 foot vertical lift to be used also for summer tourists.

With increasing ease of rapid transportation by jet, Alaska's innumerable recreational assets will become accessible to thousands of distant visitors from all parts of the United States, and, by means of the transpolar route, of the world. What is needed is a series of planned and integrated rental or charter transportation services from major airports to lakes, streams and mountain areas in which should be established adequate lodging and eating facilities. A breakthrough by a well organized and financed group in this field is a matter of time, and would be the precursor of substantial similar development as are taking place elsewhere in the world, as in the Andes, Australia and New Zealand, not to mention European areas.

BUSINESS OPERATING CONDITIONS

Doing business in Alaska is not greatly more difficult or complicated than elsewhere in the United States. To be certain, there are some differences which essentially relate to the establishment rather than operation of enterprises. The climatic hazards are no greater than those obtaining in the northern tier of states. Transportation by air between Alaskan communities is frequent and reliable, as it is with the "outside." Telephone service, especially to other parts of the United States, is excellent although expensive. The shipping of freight by water is time-consuming and, by and large, expensive due to present lack of back-haul. However, it is not an insurmountable obstacle to most business operations.

The cost of living in Alaska is high, and artificially so. *Table III,* "Cost of Living Indices for Alaska" exemplifies the situation. As might be expected, wage rates are also high although in some categories they are comparable to those which prevail in New York City. Skilled office help is reasonably available; more often than not, permanent commercial establishments draw upon federal employees wishing to change occupational status. Rentals of office and commercial space are high but, with the increasing number of good, modern office buildings, the situation should become ameliorated. With increasing diversification of enterprise, both quantity and quality of personnel and physical facilities are improving year after year.

Table III

Cost of Living Indices for Alaska

(Compared to Seattle, Wash. — 1956=100)

Item	Juneau	Anchorage	Fairbanks
Food group (total)	128.3	145.7	158.6
Housing	147.1	153.5	182.6
Apparel	118.9	122.7	120.0
Transportation	117.5	137.9	141.8
Medical care	104.3	125.6	117.7
Personal care	118.2	134.4	133.3
Reading and recreation	117.3	110.9	126.2
Other goods and services	119.2	114.5	124.9
Total (Incl. sales tax)	129.2	139.1	156.2

Source: Ward Index of Consumer Prices in Seven Alaskan Cities. Joseph P. Ward and Associates, Seattle, Washington.

In appraising Alaska's potential for business, investment and industrial development it is important to bear in mind that the state is "the last frontier," and in a state of flux which calls for dexterity in analyzing development factors of business establishment and operational feasibility. The new state's government, in common with its citizens, is even more industry and business-development conscious than most older states. The inquiring industrialist, or businessman, will find the atmosphere conducive to negotiation and discussion. As evidence of this desire to provide all possible incentives to development, on March 29, 1957, the Territorial Legislature passed comprehensive legislation to facilitate such development. The act (Chapter 129, H. B. 186) enunciates policies and mechanisms for

temporary industrial tax incentives which are extremely liberal even though subject to administration and review by a Board and Director of Industrial Tax Exemption. Designated industrial and commercial operations are exempt from income tax upon industrial development income derived during ten years following commencement of operations. Similarly, such exempted businesses are not subject to any license fees, excise or other taxes for a period of 10 years except contributions to the Alaska Unemployment Compensation Fund. The property of such businesses are also exempted from all taxes (save federal of course) for periods of years adjusted to the size of the investments. For example, the period of exemption is five years for investment in real or personal property under $1 million, but 10 years when such investment exceeds $10 million.

The Act describes the general procedures for review, approval or refusal of the granting of exemptions, as well as applicable terms and conditions. Fundamental to procedures, policies and conditions is the stated objective that the "petitioning industry is of a substantial benefit to the general economy of Alaska on the score of anticipated increase in production to supply markets outside Alaska; or to supply an existing demand in Alaska which has not been previously supplied in substantial quantities, and in view of the investment, technology and new jobs involved."

Under the U. S. Congress "Alaska Omnibus Bill" of 1959, Alaska is made eligible to participate in a number of Federal grants-in-aid programs on a comparable basis with other states. It also terminates certain special Federal programs in the new state, and authorizes measures for the orderly transition from Territorial to state organization and operations. It clarifies the applicability or inapplicability of certain laws to Alaska. Certain transitional aids are provided to the new State amounting to $28.5 millions during the next five years.

State agencies in Juneau, and also in Anchorage and Fairbanks, together with the new Congressional delegation in Washington, D. C., and local chambers of commerce, have substantial and reliable information on almost every phase of Alaskan development. Alaska's banks are aggressive, and under the new state, stand ready and able to assist the serious investor and industrialist in appraising and developing the 49th state's opportunities.

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The Case for An Unmanaged Investment Company

by Edward F. Renshaw and Paul J. Feldstein

THE PROBLEM OF CHOICE and supervision which originally created a need for investment companies has so mushroomed these institutions that today a case can be made for creating a new investment institution, what we have chosen to call an "unmanaged investment company"—in other words a company dedicated to the task of following a representative average.

At the present time there are over 250 active investment companies in the United States. With a growing proliferation of investment companies—each with different managements and slightly differentiated investment policies—becoming informed about investment policies, equity holdings and past performance can be as painstaking and time-consuming as trying to become informed about the individual enterprises which are indirectly represented. Given so much choice, it does not seem likely that the inexperienced investor or the person who lacks the time and information to supervise his own portfolio will be any better able to choose a better than average portfolio of investment company stocks.

While investing in the Dow Jones Industrial average, for instance, would mean foregoing the possibility of doing better than the average, it would also mean that the investor would be assured of never doing significantly worse. In addition to the ease with which one could follow the performance of his portfolio, the investor would obtain any psychological benefit of having invested in a representative portion of American business, familiar to investors in general. Provided the average were not too large or too complicated, real economies in supervision could be obtained by eliminating the cost of advisory service.[1]

Rise in Institutional Investing

Since the end of World War II a transformation has been taking place in the equity market. The institutional investor has been assuming a more prominent role. Annual net purchases of equities by institutions, which as of 1940 totaled no more than $100 million, have been estimated to have ranged from $1,830 million to $3,000 million in 1954.[2]

According to a recent compilation by the New York Stock Exchange, estimated holdings of listed stocks by institutional investors at the end of 1958 reached a new peak of $45 billion, or 16.3% of the $276.7 billion market value of all NYSE listed shares.[3]

Of the various institutional investors, the rise of the open-end investment company has perhaps been the most spectacular. While the closed-end investment company is still a sizeable financial institution with over $1 billion in net assets at the end of 1956, net assets of open-end companies, which in 1928 constituted only five per cent of the assets of all management investment companies, were in 1954 valued at over five times the closed-end figure[4]; in 1956 at over seven times the closed-end figure. *Table I,* following depicts the growth of investment company assets, 1940-57.

If the figures for the New York Stock Exchange listings are representative of the general pattern of equity holdings, one can infer that Mutual Funds are now the most important institutional investors. Mutual Funds and non-insured pension funds—the two largest groups—held $10.2 billion and $9.1 billion of the shares trade on the NYSE at the end of 1958[5]. In a way this is surprising since objective studies indicate that the closed-

Table I

Growth of Investment Company Assets* Since 1940

(Millions of Dollars)

Year	Open-End	Closed-End	Total
1957	8,714	1,210	9,924
1956	9,046	1,264	10,310
1955	7,838	1,199	9,037
1954	6,109	1,188	7,298
1953	4,146	928	5,675
1952	3,931	978	4,910
1950	2,531	843	3,374
1948	1,506	745	2,250
1946	1,311	851	2,163
1944	882	739	1,621
1942	487	557	1,044
1940	448	613	1,062

*Including funded debt and bank loans.

Source: National Association of Investment Companies.

1. Footnotes appear at end of article.

Edward F. Renshaw's main field of interest is public finance, and currently he is at the University of California. Prior to that he was an instructor in the department of economics at the University of Chicago.

Paul J. Feldstein is completing requirements for his doctor's degree (with the aid of a grant from the Kellogg Foundation) at the Graduate School of Business, University of California.

end investment companies have on the average tended to out perform open-end companies.[6]

The rise in popularity of open-end investment company shares has variously been attributed to a realization that equities are a hedge against inflation, vigorous promotion by investment companies on this ground, a ready willingness of investment companies to redeem outstanding shares at asset value, relaxation of state laws regulating private trust investments, a redistribution of income which permits middle-income people to invest part of their increased income, and the fact that other institutions in their shift toward equities have favored mutual fund shares.[7]

Whatever the forces responsible for the growth of investment companies are, it appears certain that they are not likely to abate within the foreseeable future. According to Arthur Wiesenberger the growth in the assets of mutual funds (net investment plus capital appreciation) has been remarkably constant for the past 15 years—exceeding 20% a year. Within the next decade, continuation of this trend would result in a business of $40 to $50 billion with more than 5 million shareholders.

Performance Records

While a great deal of information on investment companies has been collected in recent years[8] and analyzed in terms of performance[9] no one has seriously questioned two of the basic axioms of investment company policy: notably, that professional advice and continued supervision are worth their price.

The evidence that can be cited, however, indicates that the average return from professional advice and continued supervision is very low. In many cases it is zero or negative; in other words, investment companies as a whole have not outperformed representative stock averages which could form the basis of an "unmanaged" portfolio.[10] This is not to contend that there haven't been better than average investment companies, but rather that these companies in the main have been offset by other companies which have performed less well than the major averages.

While it seems clear that no single standard will suffice as a measure for comparing the performance of investment companies with different investment policies or goals, and with varying emphasis upon preservation of capital, income, and capital appreciation, a general comparison of investment company performance with leading market averages is valid if one accepts the assumption that the management goal is to outperform the unmanaged average under consideration.[11]

The Cowles Commission's studies[12] and others[13] suggest that stock market forecasters have on the average been unsuccessful at forecasting.[14] Indeed, since to be correct in forecasting a substantial change in price implies that the market has made an error in buying and selling at existing prices, a serious question can be raised as to whether it is reasonable to expect forecasting to ever be successful on the average. On the basis of both logic and the experience of forecasters one has reason to doubt that the performance of the average investment companies would be better than the performance of representative averages. At least three important sources of information can be cited as confirming this doubt.

(1) The Securities and Exchange Commission once undertook to test claims of investment companies and their sponsors that these organizations provide the investor with a kind of specialized and expert management which he was not qualified to undertake himself or could not individually afford to get.[15] Investment company results were compared with performance of a common stock index over the years 1927-1937, which included years of rising and declining prices and active and inactive security markets. The conclusion of the Commission was that over this period no significant difference existed between the performance of investment companies and that of the common stock index.

The performance of investment companies was slightly poorer than the index during years of rising prices and better than the index during periods of declining stock prices. "As the performance of these investment companies was substantially that of a common stock index—which may be regarded essentially as an unmanaged portfolio—it appears that the typical investment company over the past decade failed to meet the sometimes avowed objective of a performance surpassing such an index."[16]

(2) The American Institute for Economic Research has compared the performance of a large number of leading investment companies with Moody's 125 stock average during the period 1920-1958. Both averages are adjusted to show annual reinvestment of dividends. Of interest is the fact that over this long period of time the two averages parallel each other closely.[17] It does not appear that the performance of investment company stocks has been superior to the representative average.

(3) An inspection of Arthur Wiesenberger's data reveals that for the period 1947-1956, only 11 of 89 leading diversified common stock and balanced funds had a percentage increase in net assets per share (plus dividends and distributions) in excess of the percentage increase in the DJI (255%) which makes no allowance for dividends.[18] It is clear that over the time period considered an investor would have been better off on the average to have invested in a company following the DJI than to have picked an investment company at random.

IMPLICATIONS AND PROBLEMS

While nearly any reputable market average could form the basis of an unmanaged investment company, the most likely candidate is the Dow Jones Industrial Average. This judgment is made not because the DJI Average is a particularly good index, but because it is familiar to nearly every investor; it is an average which, whether it deserves it or not, has the veneration and respect of its well known component parts—General Motors, Standard Oil (New Jersey), AT&T, etc., all

rolled into one. On that basis it could be sold on faith alone, for what investor would not like to own a share of the DJI, a share in American enterprise itself?

For our purpose it will be useful to discuss the idea of an unmanaged investment company in terms of the DJI Average since it brings to light some of the problems and pit-falls that would beset unmanaged investment companies.

Each of the 30 components of the DJI, which include 29 industrials and one utility, is a relatively high-grade stock with a broad investment following. In 1953, DJI stocks represented 15 different industries and had a market value equal to about 31% of the value of all stocks listed on the New York Stock Exchange. They had a pre-tax income in 1951 estimated at about 18% of the value of all corporate profits before taxes. The aggregate volume of trading on the New York Stock Exchange in the 30 stocks comprising the DJI fluctuated from 7.6 to 19.1% of the total industrial shares traded—based on a 45 day sample taken during 1952-3.[19]

While the DJI represents a significant part of U. S. business, the relative importance of any one of the 30 companies making up the index depends upon the price of an individual share and not on the aggregate market value of the company's stock; in this respect the DJI is similar to the New York Times and New York Herald-Tribune indexes, and differs from those of Standard and Poor. From a technical point of view the DJI cannot claim to truly represent the changing fortune of either business in general or the companies it represents.[20]

Its virtue from a computational standpoint is simplicity. From the standpoint of an unmanaged investment company, it is really the over-simplicity of DJI's construction which makes it a complex index to follow. Rather than increase the number of shares composing the index when a component company decides upon a stock split, the members of the DJI settled upon the ingenious device of lowering the index's divisor (the original divisor was 30, at present it is 4.283) in order to keep the index at its former level. The effect of this adjustment to preserve the index's continuity is to arbitrarily change the weight or importance of the individual components every time there is a stock split. From the standpoint of an unmanaged investment company, following the DJI, this would mean selling a portion of the split shares and buying un-split shares to even up the numerical holdings of each company's stock.

'Everything in Moderation'

Since the decision to split is a reflection of company growth (superior performance rather than inferior performance), one could question at this juncture whether it would be in the best interest of the stock holders of an unmanaged investment company to continue to follow meticulously the DJI. Aside from the brokerage fees involved in shifting the investment company's assets, there would exist the possibility that a sizable shift might in itself affect the relative market price at which shares could be traded. Prudence would seem to dictate that the unmanaged investment company strive only to approximate the holdings suggested by the index and that substantial adjustments be made gradually.

The effect of stock splits on the DJI serves to emphasize one particular kind of adjustment problem associated with the construction of major averages and its possible ramifications with respect to the operation of an unmanaged investment company; the need for and affect of various other adjustments are competently dealt with in *Common Stock Indexes*.[21] Suffice to point out here that if the idea of the unmanaged investment company were to blossom into an important financial institution, there would exist a justification for public regulations with respect to the construction of the various indexes[22] and the substitution of component companies to insure stock market stability and the prevention of unfair manipulations.

A few words can be said with respect to the problem of choosing an index to follow. Other things equal, the cost of making the adjustments implied by various stock market indexes is the deciding factor. Popularity and relative performance over selected periods of time would be two additional variables to look at in selecting an index. If the idea of an unmanaged investment company were really to catch fire, there would exist a justification for creating some new indexes. In this connection, indexes subject to what Frederick Macaulay has termed "mathematical drift" bear more careful attention than has previously been given to them.[23]

CONCLUDING REMARKS

According to Weissman, "Both the Gibson and Wendt studies tend strongly to support the view that most investors would be happy if the results obtained by them approximated the stock market average. I am sure than an extensive study would confirm this view, especially for smaller investors and those who attempt to make the most of intermediary movements.[24]

The evidence presented in this paper supports the view that the average investor in investment companies would be better off if a representative market average were followed. The perplexing question that must be raised is why has the unmanaged investment company not come into being? Is it because the average investor is captivated with the notion that a managed fund might conceivably do better than the market average? Is it because the promoters of investment companies are would-be managers? Is it because the public places a great deal of faith in "management"? These are the questions that are uppermost in the authors' minds, the questions we would like to have answered but have no answer for.

The case for an "unmanaged" investment company will have served its purpose if attention has been focused on the costs and returns from portfolio management. In the long-run, both the investor and investor advisory service will be made better off if explicit consideration is given to the relative performance of managed and unmanaged funds; it would serve to make the reward that may be obtained for good management

greater and the penalty that is paid for bad management more evident.

It is our belief that the competition of an "unmanaged" portfolio, whether it comes about via the creation of a new kind of investment institution, or a modification of the investment policies of existing institutions, might serve to further this desirable social end.

FOOTNOTES

1. Operating and advisory expenses typically amount to 12-15% of investment income. In 1946 the ratio of expenses to average net assets for the larger open-end funds ranged from .31% for Broad Street Investing Co. to 1.54% for Equity Fund.

2. U. S. Congress, Senate, Factors Affecting the Buying and Selling of Equity Securities, Hearings before the Committee on Banking and Currency, U. S. Senate, 84th Cong., 1st Sess., March 3, 1955 (Washington: Government Printing Office, 1955), p. 97.

3. Brookmire Investment Reports, May 11, 1959, p. 456.

4. William B. Neenan, "Review of Institutional Activity in the Equity Market, 1951-54," The Journal of Finance, Vol. XII, December 1957, p. 475-76.

5. Brookmire, op. cit.

6. C. Russell Doane and Edward J. Hills, Investment Trusts and Funds (Great Barrington, Massachusetts: American Institute for Economic Research, 1958), p. 72. "The preceding table and chart provide unmistakable evidence that the closed-end companies, both individually and as a group, have provided the more favorable investment results in the past. Moreover, this differential becomes markedly greater when viewed from the standpoint of the results that an investor would have obtained if he had purchased shares at the beginning and sold them at the end of any of the periods shown."

7. Neenan, op. cit., p. 476.

8. For the most current and up to date information see: Wiesenberger, Arthur & Co., Investment Companies (New York: Wiesenberger, Arthur & Co.)

9. For a discussion of some of the problems involved in making comparisons, see: Rudolph L. Weissman, The Investment Company and the Investor (New York: Harper & Brothers, 1951), p. 95-105. For a recent attempt at ranking companies by performance, see: Barnes, Your Buying Guide to Mutual Funds and Investment Companies (Larchmont, New York: American Research Council, 1956).

10. Unmanaged in this sense does not mean to imply that the portfolio will be unmanaged but rather that the cost of management will be largely shifted on to those individuals responsible for constructing and maintaining the representative averages. The Dow Jones Industrial Average which originally consisted of 12 stocks was broadened in 1916 to include 20 and again in 1928 to the present number of 30 stocks, and over the following years numerous substitutions were made in the components of the average. See: Hartman L. Butler Jr. and Martin G. Decker, "A Security Check on the Dow Jones Industrial Average," The Analysts Journal, February 1953, p. 37.

11. Varying emphasis, of course, could be placed upon outperforming the average on the market upside as opposed to the market down-side.

12. Alfred Cowles, "Can Stock Market Forecasters Forecast," Econometrica, Vol. 1 (1933), pp. 309-24; "Stock Market Forecasting," Econometrica, Vol. 12 (1944), pp. 206-14. It should be noted that the Cowles studies have been criticized on the grounds that they did not draw any sharp line of distinction between long and short term forecasting or between differing objectives of various forecasters. For a critique of these matters see, Delbert Harlow Kerchner, "Some Limitations Upon the Usefulness of Investors' Services" (Chicago: Unpublished Ph.D. Dissertation, School of Business, University of Chicago, August, 1936), p. 124-36.

13. Edward F. Underwood and Myron C. Nelkin, "Brokerage House Opinion at Turning Points in the Stock Market," The Analyst's Journal, 4th Quarter 1946.

14. Not all of the studies are negative. An unpublished study by Erwin Goehring covering the period 1921-33 suggests that some of the larger professional forecasting services were right more often than wrong in predicting the trend in the general market. See, "An Appraisal of Some Security Price Forecasting Services" (Chicago: Unpublished Masters Thesis, School of Business, University of Chicago, March, 1938).

15. Rudolph L. Weissman, The Investment Company and the Investor (New York: Harper & Brothers, 1951), p. 96.

16. Ibid.

17. Op. cit., p. 67.

18. Wiesenberger, op. cit., pp. 129-31.

19. Figures from: Hartman L. Butler Jr. and Martin G. Decker, op. cit., pp. 37-39.

20. See: Saul A. Smerling, "Found a Realistic Market Measure," Analysts Journal, May 1957, pp. 59-62.

21. Alfred Cowles 3rd and Associates, Common-Stock Indexes, 1917-1937 (Bloomington, Indiana; Principia Press, Inc., 1938), pp. 1-50.

22. The stock-split adjustment problem in the DJI, for instance, could easily be corrected for by adjusting the numerator of the index rather than the denominator to preserve the continuity.

23. Frederick R. Macaulay, The Movements of Interest Rates, Bond Yields and Stock Prices in the United States Since 1856 (New York: National Bureau of Economic Research, 1938), pp. 147-48.

24. Rudolph L. Weissman, The Investment Company and the Investor (New York: Harper & Brothers, 1951), p. 97.

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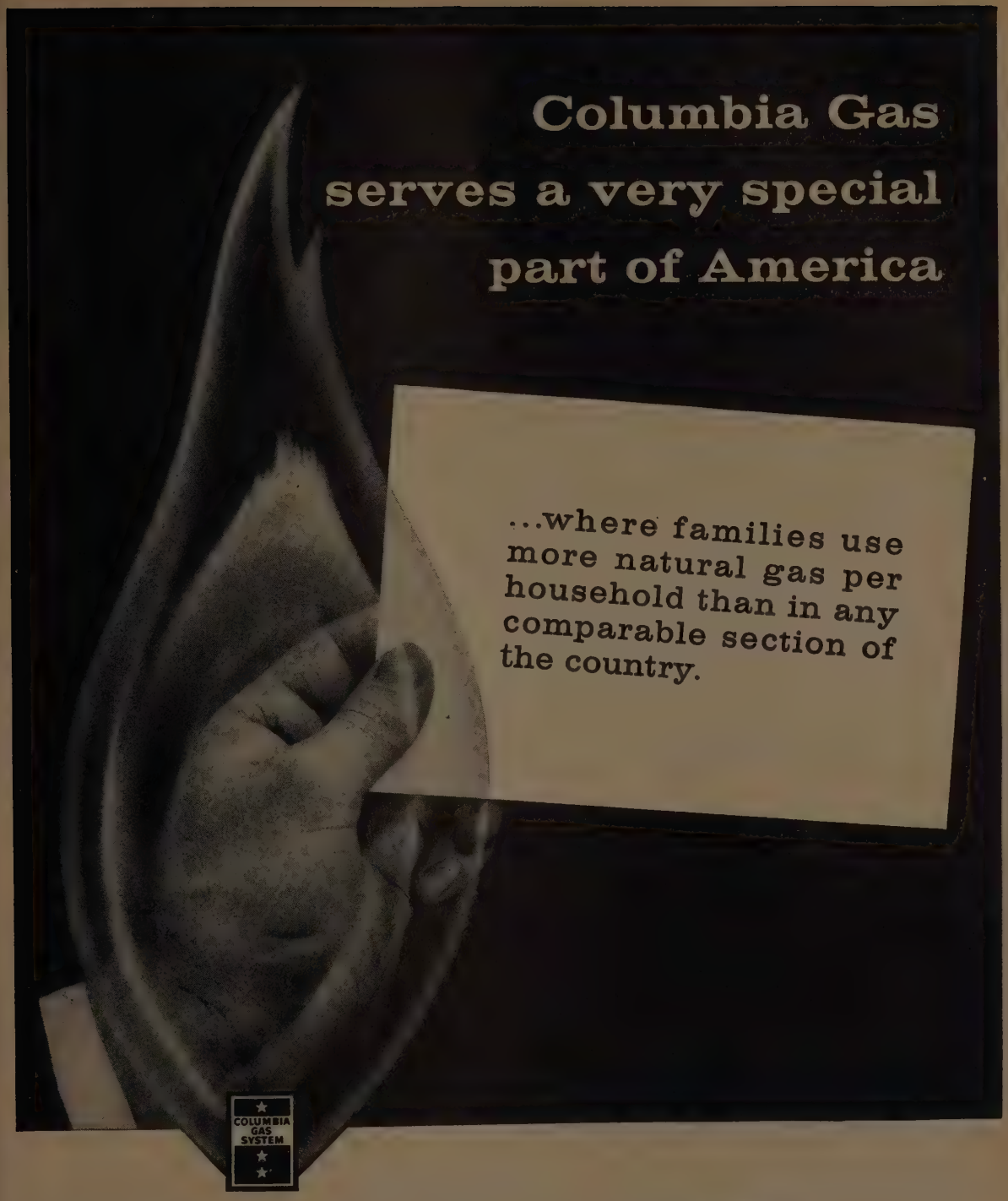
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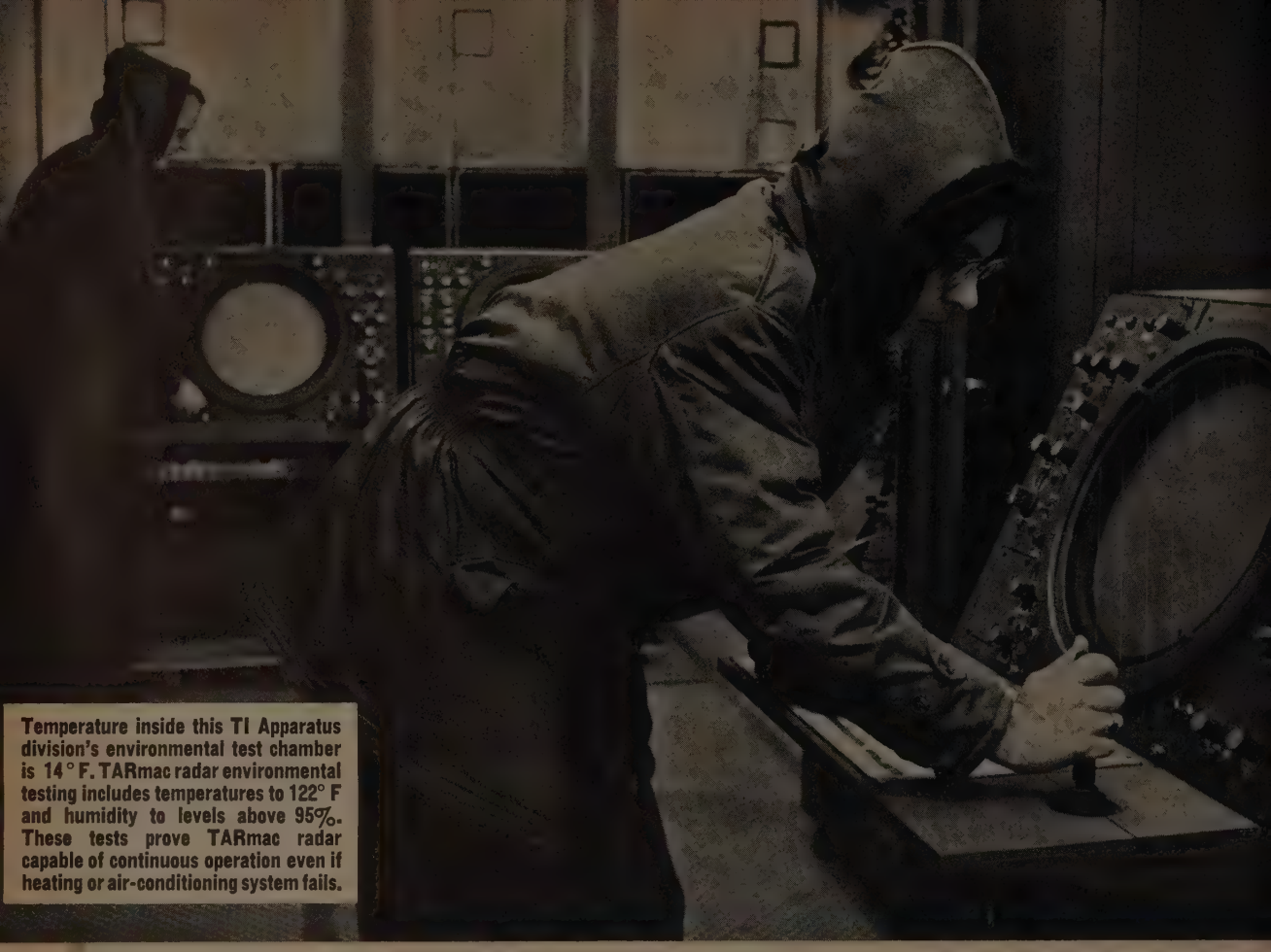


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HIGH FINANCE IN ZINC

by Frederick R. Hoisington

BECAUSE ZINC IS QUITE LACKING IN GLAMOUR, it rarely receives the attention it rightfully deserves. Unfortunately, the metal is usually not recognizable, as it is "seen" more often as an integral part of brass products, galvanized steel, and in zinc alloy die castings where it is often hidden by protective or decorative finishes, or as a chemical component of paint, rubber and other products.

However, this bluish white metal is one of the most versatile and internationally important of the industrial metals. Although it may not perform a significant function in atomic energy, space travel, or intercontinental missiles, increasing amounts of zinc will be necessary to meet requirements of an expanding world industrial activity.

In the past, a comprehensive analysis of zinc's statistical position, and price outlook, has always proved valuable to producers, consumers and traders alike. Such an analysis is particularly important now as we enter "The Surging Sixties".

The following discussion of zinc includes facts which this writer—long a student of zinc, an economist, businessman, and investor—has found useful in formulating remunerative market decisions. It is hoped that this discussion will enable the trader, better to understand the possible trend of zinc prices, to help him make money in the future market, and/or in leading zinc company stocks.

As the business cycle continues to point upward, will the price of zinc and of zinc stocks rise much, if any, above current levels? Well . . . let's look at the zinc situation from both the academic and non-academic viewpoints.

Zinc (chemical symbol Zn) is a metallic chemical element, with atomic weight 65⅜, melting point 419 degrees C, and boiling point 907 degrees C. Its specific gravity of about 7 compares with tin (7.3), iron (7.9), brass (8.5), copper (8.9) and lead (11.4). In color, silvery bluish white, it is soft enough to clog the file.

Zinc occurs widely throughout the world—literally in every continent from Greenland to Australia. It is, in fact, mined in at least 35 nations. It is never found in a pure state, rather usually in one of several complex ores. The most common ore is zinc blende, or sphalerite, a zinc sulphide mixed with small amounts of the sulphides of iron, silver, cadmium, and sometimes other minerals. It usually occurs in association with galena, the sulphide of lead. It occurs in abundance in the Mountain States and in Belgium, Germany and Silesia (now Poland).

Other zinc ores are the oxide (zincite), and the carbonate, calamine or zinc spar, found generally mixed with the carbonates of cadmium, iron, manganese, magnesium and calcium.

PRODUCTION

Historically, zinc has played a role in civilized man's life from the time of Augustus Caesar, when brass, an alloy of copper and zinc, was discovered. However, zinc was not recognized separately until the 16th Century when Paracelsus described and named it. Then, about 1730, zinc smelting got under way in England. The first continental European zinc works were erected at Liege in 1807. During most of the 19th century, Germany was the leading source. Most of the German zinc was mined in Silesia, now part of Poland.

United States production began at Franklin, N. J., about 1835, and commercial smelting started in 1848 with the erection, by a forerunner of New Jersey Zinc Co., of a smelter in Newark, N. J. U. S. production, however, was unimportant until about 1872 when the railroad from the Joplin, Mo., area to La Salle, Ill., was completed; but it has led the world since about 1905.

The U. S. share in world smelter production rose from 22% in 1900, to 32% in 1912 and 1913, and spurted to around 60% during World War I. During the 1920's U. S. accounted for 40% to nearly 50%, but shrank since then to 30% during the '30's, and 25% at the outbreak of World War II. That war stimulated our output, and reduced that of the fighting zones, so that our share rose to over 50% of the world in 1945. Subsequently, our smelter output has dropped to 27% in 1958, and our mine production to a mere 12½%, losing first place for the first time in over 50 years (*Table I*).

In the United States, zinc is mined in at least 20 states, with the most important as recently as 1958, accounting for only 14% of the total. Smelter output is concentrated in nine states. Texas, adjacent Oklahoma, and Arkansas smelt 39% of the total; Montana and Idaho 26%; Pennsylvania and West Virginia 24%; and Illinois and Missouri 11%.

In the once leading Joplin, or Tri-State district, which

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Table I

Zinc — 1958 Production by Countries

This table lists each country producing at least 3% of ore and 1% or more of slab. From U. S. Bureau of Mines.

	Mine		Smelter	
	M Tons	Per Cent	M Tons	Per Cent
U. S. A.	412	12-1/2%	829	27%
USSR*	400	12	400	13
Canada	424	12-1/2	252	8
Belgium	0	0	237	8
Poland*	154	4-1/2	180	6
France	16	1/2	165	5
Japan	156	4-1/2	155	5
Germany (West)	94	3	147	5
Australia	294	9	129	4
U. K.	0	0	84	3
Italy	151	4-1/2	79	3
Mexico	247	7	63	2
Belgian Congo	126	4	59	2
Peru	142	4	32	1
Spain	91	3	27	1
Other	643**	19	223	7
World	3,350	100%	3,058	100%
Western Hemisphere	1,302	39	1,194	39
Free World	2,627	79	2,411	79

* Conjectural

** Europe 298, Africa 176, Asia 93, America 76

mined 109,000 tons as recently as 1947, there is now so little ore left of a grade that can be mined economically (at present market prices) that only 8,000 tons were produced in 1958 and barely 1,000 in 1959. The richest deposits in New Jersey have also been worked out, and the once important Warren, Arizona, is no longer in the picture. On the other hand, East Tennessee rose from 31,000 tons in 1947, to 59,000 tons in 1958, and an estimated 87,000 in 1959. St. Lawrence County, New York, produced from 34,000 to 53,000 tons, dropping back to around 40,000 in 1959, as a result of the steel strike (*Table II*). More drastic geographical shifts have occurred in zinc mining, in recent years, than in any other leading industry including textiles. It is no wonder the industry has been petitioning Congress for relief, though some of the remedies proposed and adopted may be questioned.

Table II

Zinc — U. S. Mine Production by States — Tons

	1958	1959 (Estimated)
Tennessee	59,130	87,000
New York	53,475	40,000
Idaho	49,725	53,000
Utah	44,982	36,000
Colorado	37,132	36,000
Montana	33,238	33,000
Arizona	28,532	35,000
Illinois	24,940	25,000
Virginia	20,000	14,000
Washington	18,797	17,000
Other	42,054	41,000
	412,005	415,000

Rapid Rise in Zinc Imports

The exhaustion of once important ore bodies, and generally higher mining costs, have brought about a rapid rise in zinc imports, both in ore and concentrates, as well as in slabs, ingots and castings, despite the 0.7c net per lb. tariff.

In the early years of the century U. S. smelter production was a fair measure of mine output. Before World War II, U. S. output from imported ores was negligible, except during World War I when it rose to around 15% of the total in 1916 and 1917, dropping to 1-3% in the inter-war period. However, an increasing proportion of domestic primary slab zinc production has been smelted from imported ores since 1940, rising from 3% in 1938, to an average of 30% during 1940-45, 32% in 1946-51, and 43% in 1952-57. The year 1958 saw 53% of U. S. primary smelter production from imported ore, and a further displacement of domestic ores was averted only by the imposition of import quotas, effective October 1958.

Leading U. S. Companies

The leading factors in the U. S. market on the selling side are American Smelting & Refining Co. and Anaconda, as will be seen from *Table III*.

Table III

1958 Slab Zinc Production by Leading U. S. Companies

American Smelting & Refining Co.	181,592
Anaconda	148,922
American Zinc, Lead & Smelting	107,316
St. Joseph Lead Co.	106,241
American Metal Climax	76,909
New Jersey Zinc Co.	100,000 (est.)
Bunker Hill	55,454
Eagle Picher	7,833
All Others	44,635
	828,902

Although U. S. is still far in the lead in smelter output, the largest single producing organization in the world is the Soviet Union, with an estimated output of 400,000 tons, while second largest (the largest producing private company) is Vieille Montagne of little Belgium, with 211,600 tons (two-thirds in Belgium, one-third in France). The third is Consolidated Mining & Smelting Co. (Canada), and our own largest, American Smelting & Refining, ranks only fourth.

On the buying side, the leading factors are the steel producers (for galvanizing) and the die casters.

Sources of U. S. Imports

We obtained about one-third of the 462,000 tons imported in ores and concentrates, in 1958, from Canada; another third from Mexico; and most of the remainder from Peru. Nearly all of the zinc mined in these three countries, which they did not smelt themselves, was shipped to U. S. And of the 195,000 tons imported in blocks, pigs or slabs, half came from Canada and the remainder was scattered — Mexico, Peru, eight European countries, Australia, Japan and Belgian Congo.

Tariffs and Import Quotas

U. S. mining costs are rising because of exhaustion of ore bodies and rising wage and material costs, while most foreign deposits are richer and wages lower. Accordingly, the zinc industry has continually appealed to the government for help. We have had a tariff on zinc for many years, except for Feb. 12-July 24, 1952. The rate for some time was 0.6 cents per pound of zinc content of most ores, 0.7 cents per pound on slabs, 0.75 cents on scrap, and 1 to 1.125 cents on sheets.

Beginning immediately after World War II, the government bought slab zinc from domestic producers for the stockpile, to a reported total of 1,175,000 tons. Also, from 1956 through 1958, barter deals resulted in acquisition of 294,000 tons for the "Supplemental Stockpile". The stockpiles now amount to about 1,470,000 tons, or 18 months supply at present consumption rate—and are eight times producers' stocks. Cost to the taxpayers, of the domestic zinc stockpile alone, including purchase price, is estimated at $280 million. Handling, storage and interest must be something like $350 million; and interest on the investment, at the rate the government is now paying, must approximate $17 million yearly.

Like the farm support program, the zinc support program has pleased most of its recipients (one does not shoot Santa Claus), though they have sometimes considered the assistance inadequate. As the French say, "L'appetit vient en mangeant" — The appetite comes while eating. Whether the program has really helped the industry, in the long run, is another question. Certainly it has cost both consumer and taxpayer dearly. It has stimulated foreign production and has kept some marginal domestic operators in business who might have done better for themselves by shifting into some more profitable occupation long since, as they will presumably have to do some time anyway.

The hopelessness of trying to shore up the U. S. price by ever-increasing subsidies, and the official reluctance to raise the tariff, finally led to imposition of import quotas, effective Oct. 1, 1958, in the amount of 80% of 1953-57 average imports. These quotas are shown in *Table IV* (short tons per quarter):

Table IV

Import Quotas

	Ore Producers	Metal Producers	Total
Canada	33,240	18,920	52,160
Mexico	35,240	3,160	38,400
Peru	17,560	1,880	19,440
Belgium		3,760	3,760
Belgian Congo		2,720	2,720
Italy		1,800	1,800
All Others	8,920	3,040	11,960
	94,960	35,280	130,240

This policy has been less expensive to the taxpayer, but is equally costly to the consumer as any other form of price support. It goes directly contrary to our policy of encouraging other countries, and invites retaliatory quotas or tariffs by the countries injured. Moreover, it is unfair to U. S. capital invested in Canada, Mexico, Peru, and elsewhere.

The quota system has also aroused objections from six of the leading smelters: American Smelting & Refining Co.; American Zinc, Lead & Smelting Co.; Athletic Mining & Smelting Co.; Blackwell Zinc Co. (subsidiary of American Metal Climax); Mathiessen & Hegeler Zinc Co.; and National Zinc Co. These six, which together smelt 44%, and mine 12½%, of the U. S. total, complain that quotas put them in a straitjacket, interfere with economical operations and, violating the free market system, are the wrong way to go about supporting the market. These companies urge that quotas be abolished, and a higher tariff substituted, high enough to protect a 13½ cent market.

Uses of Zinc

In contrast to iron and steel, for example, there are only three important uses of zinc as such, though the end uses of zinc products are legion. Of the 868,000 tons of slab zinc consumed in the U. S. in 1958, according to the U. S. Bureau of Mines, 44% was used for galvanizing and other methods of protective coating, hence was purchased by the steel producers. Die casters used 317,000 tons, or 36%, because of its low melting point and high fluidity, and 12% by brass makers. The remaining 8% was bought by rolling mills, oxide plants and miscellaneous users.

In addition to the above mentioned 868,000 tons of slab zinc, supplied by primary smelters, 179,000 tons of zinc was recovered from zinc-base, copper-base and aluminum-and magnesium-base scrap; and 95,000 tons was used directly from ore without smelting, so that the total consumption of zinc was about 1,142,000 tons. But for most market analysis purposes we can concentrate on the production and shipments of slab zinc; at any rate it is only for slab zinc, accounting for 76% of total consumption, that we have adequate current statistics.

To complete the picture of distribution, in 1958 some 34,000 tons of domestic zinc were added to government stockpile, and 8,000 tons were exported.

Returning to the principal uses of slab zinc, it is interesting to note that brass consumption was most important during both World Wars, but has been suffering from inroads of competitive metals and plastics since 1945, and will probably be less important in future wars. Brass consumption has nevertheless continued to gain, rising in the past nine years at the rate of about 1.9% yearly. Galvanizing (subject to the business cycle) shows a nine-year rate of growth of only 0.9% per annum, or less than the rate of population growth.

The 44% of zinc used in galvanizing is composed of sheets (22%), tubes (8%), wire (4%), and other forms (10%)—mostly pole line hardware, hollow ware, chains and wire cloths. Apparently none of these uses is linked primarily to any of the most rapidly growing industries, except perhaps air conditioning, which now uses about 4% of all galvanized sheets, about 1% of total slab zinc consumption.

Die casting, however, has been growing rapidly, and zinc has held its own against competing metals in this field. For this use, over 99.99% pure (Special High Grade) is required. Here the automobile industry and the machinery industry are dominant factors. It is estimated that the weight of zinc die cast, in the average automobile, rose from 71.3 lbs. in 1956, to 72.4 in 1957, and still higher in 1958.

The result has been an average yearly growth of die cast consumption of zinc of 5% from 1949 to 1958, and suggests that eventually the automobile companies (already believed to account for 29% of zinc consumption) may supersede the steel producers (who apparently use nearly 40%) as the most important market factors on the demand side of zinc.

There are six principal grades of zinc, maximum impurities allowed by the standard specifications being as shown in *Table V*.

Table V

Standard Specifications for Slab Zinc

	Lead	Iron	Cadmium	Sum of Lead, Iron & Cadmium
Special High Grade	0.006%	0.005%	0.004%	0.010%
High Grade	.070	.020	.070	.100
Intermediate	.200	.030	.500	.500
Brass Special	.600	.030	.500	1.000
Selected	.800	.040	.750	1.250
Prime Western	1.600	.080		

No aluminum is permitted. For die casting, tin content may not exceed 0.003%.

Stocks: Supply vs. Demand

The regular data we have on zinc stocks in the U. S. are from the monthly reports of the American Zinc Institute, representing stocks in the hands of producers. Consumers' stocks are not known currently, though we can sometimes conjecture whether they are increasing or decreasing. For example, consumers' stocks have a habit of rising just before an expected increase in producers' prices (usually foreshadowed by a rising trend in the futures market), or an expected strike at mines or smelters. Conversely, consumers generally draw on stocks when their own sales fall off, or when they feel that they have built up excessive inventories.

While recognizing the limitations of the data, we may compare the level and changes in producers' stocks with the level and trend of producers' prices. Since the correlation is inverse, it is desirable to plot stocks on an inverted scale.

Structure of the Zinc Market

The zinc market in the U. S. really consists of at least three different markets:

(1) Concentrates—the interior market for concentrates. The price paid by custom smelters is based on the producers' price for slab zinc, and the zinc content of the concentrate, modified by the character of the concentrate (nature of the impurities as effecting the cost of smelting), and by local conditions such as how busy the smelter is, and how much concentrate he has on hand or on order. The import market is similarly determined within limits set by the relation between import prices in U. S., U. K. and other importing countries and relative volume of offerings of importing countries. The price is automatically affected by import duties and freight costs.

(2) Slab zinc. The spot or cash price of actual zinc is set by the various smelters, at as high a price as they think will be able to sell their output. It is limited on the upside by fear of losing sales to competing domestic smelters, to importers, or to substitute materials. In a dull market, the price may not be lowered enough to sell the entire output, if the seller considers the lack of demand only temporary. If stocks pile up, the price may have to be cut until production can be curtailed sufficiently to bring about a balance. One upper limit to the domestic slab zinc price is set by the possibility of imports either of concentrate or of slab. Normally, concentrates can be brought in more economically from nearby sources such as Canada and Latin America, which mine more than they smelt. When still more metal is required, the price may have to rise enough to attract, to U. S. smelters, concentrates that ordinarily go to foreign smelters. At the same time, or a little later, foreign slab zinc may be attracted, especially in certain grades that may be in short supply here. At times our market may rise enough, or foreign markets fall enough, to attract slab zinc from European smelters or even out of stocks in London, for example. A lower price limit would be that at which enough U. S. zinc could be exported to deplete our stocks. In recent years we have generally been above world markets, so that exports have been small and only in particular grades temporarily in short supply abroad.

(3) The futures markets. The two main futures markets are the London Metal Exchange (LME) and the Commodity Exchange, New York (Comex), LME prices are quoted in pounds sterling per long ton of 2,240 lbs. and Comex prices are in U. S. cents per pound. With exchange at par ($2.80 per £) each £1 per ton equals ⅛ cent, or 12½ points in New York. Thus, the Nov. 30, 1959 LME prices might be compared with Comex as follows:

	London Spot or N. Y. December	3 months or March
London	94 7/8	89 11/16
$ U. S. Equivalent	11.86	11.21
Duty	.7	.7
	12.56	11.91
New York	11.30	11.50
London over New York	1.26	.41

The "backwardation" of the London market is explained by small stocks there, while heavy stocks in U. S. result in "contango" or "carrying charges" here.*

*For a detailed explanation of "contango", see The Analysts Journal, July 1959, pp. 32, 33.—Ed.

Price History of Zinc

The New York price of zinc generally exceeds the East St. Louis price by about the freight (generally ¼ to ½ cent, or say 3-5%), so it matters little which price is used as long as the series is consistent.

The Office of Price Administration's price ceiling prevented a peak during World War II, but one occurred soon after ceilings were removed. All these peaks were of short duration, while the periods of subnormal price between wars generally lasted some years.

No long term price trend was apparent as long as we were on the gold standard. After each war the price subsided to around the pre-war level. However, this did not occur following World War II, and the Korean War, because of a combination of the permanently higher general price level, the steadily rising wage trend, and the exhaustion of some of the richest deposits in this country. Had a free market ruled, from 1942 to June 1946, the correlation in that period no doubt would have been good. Moreover, a free market would probably have stimulated production enough to keep the 1948 price rise more in line with industrial production.

The precipitous price drop, during 1952 and 1953, was apparently brought on by an unusual sequence of (1) post-war recovery in European output; (2) opening up new mines in Canada; (3) doubling of the price during the Korea War, with consequent stimulation of output; (4) sudden ending of hostilities; and (5) burdensome accumulation of stocks resulting from (1) to (4).

Since 1953, the trend of zinc prices has resumed its general correlation with industrial activity. The 1958 trough would probably have been deeper had the market not been supported by government stockpile buying. A lower price then would have caused sharper curtailment in both mining operations and imports, so that less burdensome stocks would have been accumulated. In that event, the 1959 business recovery would have presumably permitted a more rapid recovery in price, production and imports.

Outlook for 1960

So much for the past. For the future, will the dominant influence be war, the business cycle, or some other influence? Certainly if there were a big war, many factors would be dwarfed into insignificance. However, let us rule out war as a factor for 1960, for all forecasts would have to be completely revised in case of such a disaster.

In the past 40 years every business boom, except 1953, had been reflected in the price of zinc. Although the highs and lows of zinc prices and industrial production did not always coincide exactly, it would have been profitable, in 11 out of 12 of the cycles, to buy in the valley and to sell at the peak of the business cycle. This fact emphasizes the importance of being able to forecast the business cycle—not always a simple job.

Although some uses of zinc, like die cast, have gained more rapidly than the gain in general industrial production, the rate of growth of the other principal uses, galvanizing and brass, has lagged behind general industry. Overall, the long-term growth of zinc consumption, while slower, generally parallels industrial production.

Average Yearly Compound Rate of Growth

	Zinc Consumption	Industrial Production
1929-1959	1.4%	3.1%
1939-1959	2.2	4.8
1949-1959	3.1	4.4

There is reason to expect a faster growth trend in zinc consumption outside the U. S., as European per capita use (outside of Belgium) is considerably below ours, while that in U.S.S.R. and Japan barely one-third as high. There is evidence that European use of die cast alloy is even now picking up rapidly.

The steel strike obviously cut U. S. zinc consumption greatly, yet slab zinc stocks, after rising 13,000 tons in July, and 10,000 in August, held about unchanged during September and October, partly due to strikes at some zinc mines. Over the next few months, much depends on whether the steel workers resume their strike. If they do, and zinc production continues at the November rate or higher, it will be difficult to hold the present 12½c price. On the other hand, if steel production continues without serious interruption at close to the present rate, while zinc imports are restrained by the quotas, an orderly reduction of stocks should occur. This would enable producers to hold the 12½c price; and, if steel and general industrial production hold (perhaps in due course), to raise the price to 13c or even 13½c. After all, zinc sold at 13½c from February 1956 through April 1957, before imports were restricted, and before the New Jersey, Joplin, Wisconsin, New Mexico and Nevada mines had reached their present sad state.

For the longer term, production costs also seem more likely to rise than to fall, as deeper and thinner deposits must be utilized. Howard I. Young, president American Zinc, Lead & Smelting Co., told *The New York Society of Security Analysts* on June 4, 1959, that, in his opinion, the amount of zinc that the world will normally require cannot continue to be readily available except at a price 15 to 20% above the then level of 11c. Meanwhile, technological gyrations must be watched, as they can upset calculations of demand and of the inroads of substitutes.

The speculator, on the Commodity Exchange, will necessarily concentrate his attention largely on possible developments over the ensuing year, as the most distant future traded does not exceed 12 months. Most important is the outlook for six months, as the most active markets are in these near months. Most business cycle forecasts are of doubtful accuracy beyond six months anyway.

Others, such as industrial purchasing agents, producers, sales and budget officials, and bank loan officers, faced with the task of forecasting the official producers' price, rather than the futures market, have it easier than the Commodity Exchange trader. For the producers' price tends to lag after the futures market.

Granted that the futures market price depends on the producers' price in the long run, yet at any given time it is governed, not only by the current producers' price, but also by the market's expectation of the direction, amount and timing of the next change in the producers' price. The successful trader will "beat the gun" on the change. To do so he must study the business cycle, the monthly Zinc Institute statistics, and all the daily developments affecting either supply or demand.

CONCLUSION

For what it may be worth, this writer's opinion is that the rising phase of the business cycle still has far enough to go, both here and in Western Europe, to use up most of the excess commercial zinc stocks. Also, despite "summits", the cold war will continue and the government stockpile is not likely to be drawn upon except in extreme emergencies. The stage thus seems to be set for a further price rise before the peak of the present cycle. However, every cent advance will bring out additional output, and this fact will force producers to exercise restraint. Accordingly, no runaway price rise is likely.

As long as we keep import quotas and as long as consumption doesn't fall below the 1953-9 range, it is difficult to visualize 10c zinc. The lower limit will probably be nearer the 11c level, established October 1958, when import quotas became effective.

On the contrary, our forecast of 1960 slab consumption would probably necessitate a price of 13½c once present stocks are worked down sufficiently. The last time the trade faced sharply rising demand (1955), producers did not raise the price above 12½c until stocks had been reduced to 45,000 tons. The 13½c price brought so much zinc out of the ground, out of the scrap yards, and into the country from abroad, that U. S. stocks mounted rapidly again. When the April 1957 statistics became available, showing a 12,000 ton drop in domestic shipments, and a 16,000 ton rise in stocks (to 105,531 tons), producers concluded that the 13½c price was no longer tenable. By that time it was too late for a mere ½c or 1c cut to be effective, and within two months the price was down to 10c, where it remained for 15 months until rescued late in 1955 by the combined efforts of mine curtailments, the rising business cycle and import quotas.

Now we still have the rising business cycle (after a few months' interruption by the steel strike) and the same import quotas. Strikes have curtailed mining. When they are settled, will production again overtake demand as in 1956 and 1957? If 10.31c brought out 412,000 tons from the mines in 1958, and 11.15c gave us a 440,000 ton rate in the first half of 1959, before strikes cut output, what can we safely predict that 12½c will produce in 1960?

From all appearances, 1960 U. S. mine output could rise to around 470,000 tons. Indeed, 510,000 tons would be possible theoretically if each mining district were to maintain its best 1959 monthly production rate for the whole year. However, wages are up as well as selling price, and it is not reasonable to expect a full year's uninterrupted output at every mine. After all, the highest domestic output since the 19½c stimulation of the Korean war wore off, was 542,000 tons in 1956, and it took 13½c to achieve that. With a price half way between 1959's 11½c average, and 1956's 13½c, a compromise production forecast may not be out of line. Some older mines have shut down for good, perhaps, while newer operations may afford to step up operations at 12½c.

During 1960, what sort of demand-supply relationship would a 470,000 ton mine output give us? If we assume a further increase in smelter output from scrap, as in 1959, and retention of present import quotas, we may get a total primary smelter output of slab zinc of perhaps twice the mine output.

Against this we may project 1,020,000 tons of smelter shipments on domestic account, a rate slightly exceeding 1955's record of 1,008,000. Allowing 10,000 tons for exports and drawback, as in 1959, and no further stockpile purchases, we get total smelter shipments of 1,030,000 tons. If these forecasts are verified, or if the errors turn out to be more compensating than cumulative, smelters' stocks should decrease from about 155,000 tons, to around 65,000 tons during 1960.

With consumption probably exceeding production, producers would seem to have it within their power to hold out for a higher price before parting with their stocks. However, over the near term, they may well prefer to work down present inventories further before posting a price increase, as it would be better to avoid a premature advance that would have to be rescinded, as in November 1958, and again October 1959. Also, past records suggest that, in the absence of stockpile buying, a 13½c price could probably bring out enough zinc to satisfy our estimated requirements. It must be remembered that it costs around $2,000,000 a year in interest alone to carry present holdings. The last time we had such burdensome stocks, in 1953-54, money was easy and the same quantity could be carried for only $1,200,000.

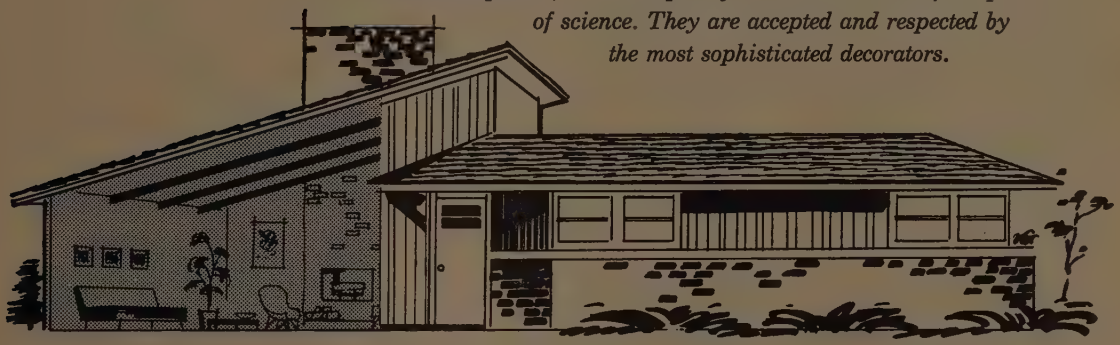
Another factor militating against an early price increase, is fear of loss of business to substitutes. Accordingly, it is more conservative to look for a period of price stability around the present level, until we can see how far the present rising business cycle will carry. After all we are close to the 12¾c price suggested under the "Seaton Plan" to stabilize the industry. A clue to any big change in price may be obtained from the regular monthly statistics issued by the American Zinc Institute, and the U. S. Bureau of Mines. As things look now, the next producer price move should be up, but there should be no hurry about it. However, this probable near term stability should not prevent jiggles both ways in the futures market whenever any important developments (as for example, possible substitution of a higher tariff for import quotas) occur, which may influence either demand or supply.

In any event, zinc is definitely on the threshold of "The Surging Sixties." As a result, it should benefit handsomely, despite its lack of "chic."



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Meletex Driers make the paint film harder and more resistant to scrubbing. The finished paint film is more resistant to water spotting and has improved resistance to mineral solvents. In baked films, Meletex Driers improve the gloss and color retention of the paint film. These new driers are also useful in preventing pitting and pinholing of latex paints.

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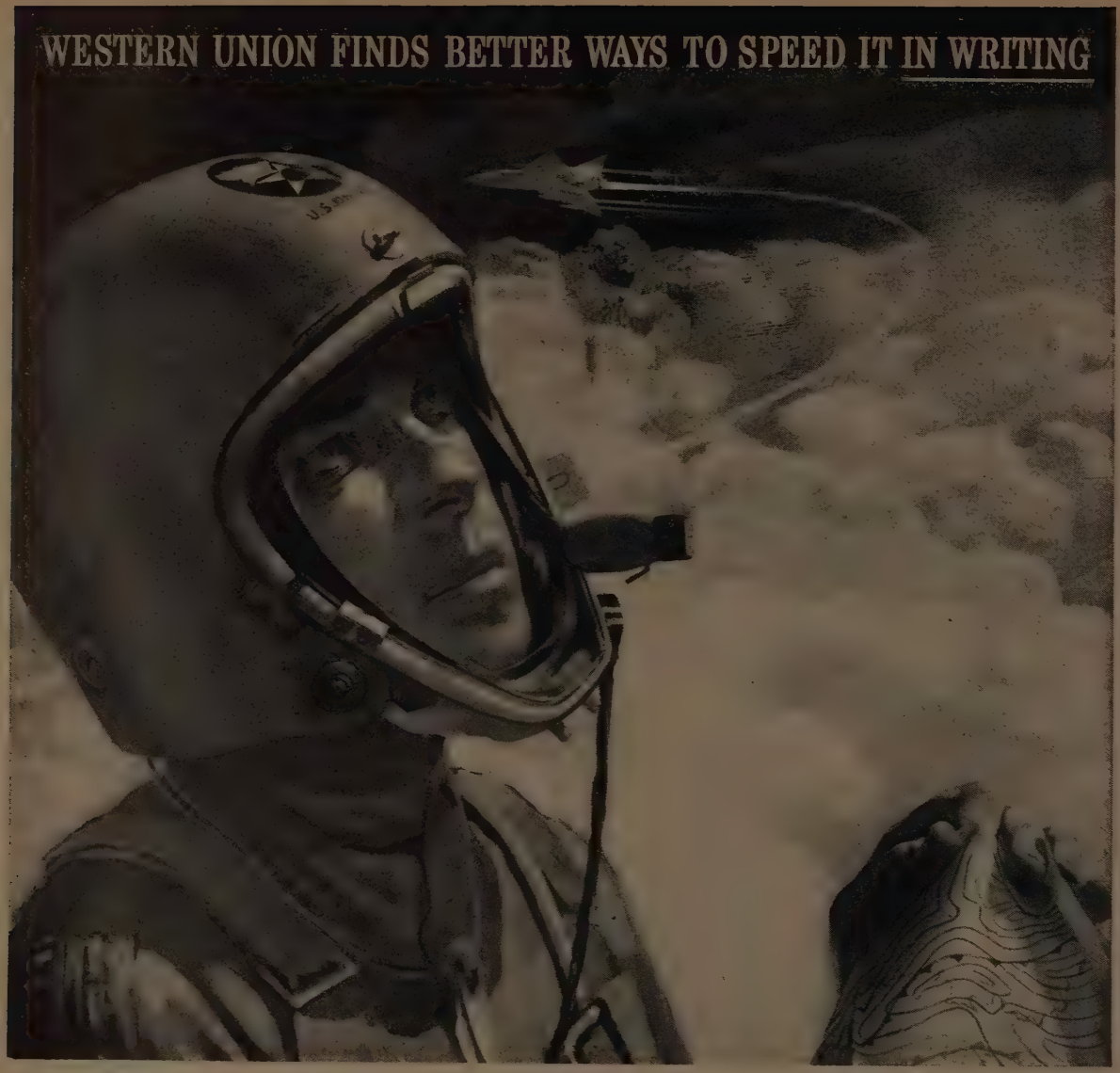
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The Economy of the Stock Market .... 1929 and Now

by Hamilton Bolton

I THINK IT IS EXCEEDINGLY APPROPRIATE that on the 30th anniversary of The Security Analysts of San Francisco, you should have asked someone to be guest speaker on the extremely intriguing subject of *The Economy and the Stock Market*—now, and then. The intriguing part is the fact that the word 1929 over the years has taken on a meaning far above its strict connotation as just another year in the financial and commercial annals of the country. The year 1929 now stands as a symbol, not only of the great peak of self-delusion of the American people, but also as a kind of definition of the whole ensuing depression right down to the bank holiday in 1933. Thus, people talk of the 1929 depression, when in effect they mean *the whole period following the stock market crash,* which occurred as we all know in October and November of that fateful year.

It is not at all easy to make a comparison between now and then. In a sense we are trying to compare two very unlike things. It's a bit like asking: was Paganini a greater violinist than Heifetz? There has been a tendency toward ambivalence on the part of the financial community in the years since 1929, in that there has been tremendous lip-service given to the fact that another "1929" is impossible; but at the same time this lip-service has been backed by a fear, particularly in the early years, that maybe it really could happen after all. And yet I now think we face another bit of reverse ambivalence which probably started about the time of the Fullbright Commission wherein it is becoming popular again to discuss the very real possibility that another 1929 may yet overtake us, as signs of rising interest rates, over-valued securities, increasing speculation, show disconcerting similarities, while inwardly, we know, *we think,* that it cannot happen again.

If we mean by 1929 an exact replica in all details except the size of the operation (the economy being so much bigger now), then I think we can safely bury our heads in the sand. If, however, we mean another major depression and stock market decline—if not of comparable magnitude—at least of such magnitude as to make every recession since 1929 look sick by comparison, then I think we must in all fairness to ourselves try to make a most careful analysis of both the similarities and differences of the present economy and stock market to that of 1929.

No Repeat of 1929 *Seen*

Strangely enough, I believe that most people are rather vague as to whether we could or could not have a business collapse of the magnitude of 1929 (always using 1929 in our broader sense of 1929-33) but are far more sure that even if we did have such a business collapse it would be quite impossible to have a stock market decline of this order. In actual fact, however, I believe that the economy itself is far less in danger of a drastic deflation than that we could have a drastic stock market decline, at some time in the future. The facts as I see it are that the nature of the economy, the stabilizing and destabilizing elements in it, preclude pretty well a repetition of the type of business collapse we had in 1929; but, that given sufficient fear, it would be quite possible to have a wholly destructive liquidation of securities which in today's thin markets could not possibly be contended with, and which therefore might conceivably take on the appearance of another 1929.

One noted authority, Dr. Julius Grodinsky of the University of Pennsylvania, informally gave it as his opinion about three years ago that if ever the New York Stock Market should drop, say about 25-30% from a recent peak, it would create just this sort of fear psychology which would then begin to feed upon itself. So far in the postwar period we have had no declines in over-all stock averages of this magnitude—so the theory remains untested to date.

STABILIZING AND DESTABILIZING ELEMENTS

Changed Pattern, 1959 *vs.* 1929

But what are those changes in the nature of the economy that make today so different from 1929? The most obvious that everybody thinks of, of course, is the enlarged role of government. Now actually this is neither a stabilizing nor a destabilizing factor; in fact to the extent that government expenditures become a greater and greater part of the economy they become a more destabilizing factor for the simple reason that a given change in this sector, because of its size, will have much greater repercussions on the economy now than

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say in 1929. And again there is the destabilizing element of the time factor in launching a change in government spending.

In actual fact it may be claimed in retrospect that both the 1953 and the 1957 recessions were triggered by changes in government spending. Yet other factors in the government picture tended to restabilize the scene.

However where the stabilizing force in the government sector comes in, is in the nature of the economy and of the tax structure, on the one hand, and the automatic entrance of such factors as unemployment insurance or "transfer payments" when production starts to drop.

Expenditure

If we study what happened to the economy in 1929, 1930, 1931 and 1932, through the mirror of the National Accounts, we see some very interesting things. The National Accounts must be viewed from two sides. First there is the side that we all pay a great deal of attention to and that is the Expenditures or Product side. GNP (Gross National Product) is a term on every analyst's lips. We talk learnedly about the outlook for the main elements, and make estimates of where they will be next year. These include: (a) Capital Expenditures, including new construction (residential, business, and other) and producers durable equipment; (b) Inventory Changes; (c) Government Purchases of Goods, Services; (d) Personal Consumption Expenditures; and (e) Export-Import balance. Of these, by far the most important in size are Personal Consumption Expenditures.

Income

Far less attention, however is paid to the other side, and it is here that we get some clues as to what is happening. GNP of course is by definition equal to Gross National Income. Every dollar of expenditure becomes income in somebody's hands. We may divide this income into three main groups: (a) Government Income (i.e. taxes mostly); (b) business income (i.e. profits and depreciation); and (c) personal income (which includes a myriad of items including wages and salaries from all sources including government, proprietors' incomes, including business and professional, and farm income, dividends and interest payments and rents, and that very important factor known as "transfer payments" which include unemployment insurance and veterans' benefits, etc. It is this factor which has become a startingly important part of the National Accounts and one of the important economic stabilizers.)

If we look at the 1929-30 National Accounts we see that Expenditures, or Product, dropped $13½ billion and that on the income side this was made up of: (a) A decline of $5½ billion in business savings; (b) A decline of $8½ billion in Personal Income, of which the same amount was the decrease in Earned Personal Income, there being no increase in transfer payments to bolster Personal Income; and (c) An increase of $½ billion in government balance of income over expenditures. The $8½ billion decrease in Personal Income was identified by an $8 billion decrease in Personal Consumption Expenditures which made up part of the GNP. The downward cycle thus began to cumulate.

In 1930-31, we saw more of the same. Output decreased $15½ billion and Income decreased the same amount made up of: (a) A decrease of $1 billion in the government sector; (b) Almost $3 billion decrease in Business Profits and Savings; and (c) Almost $11 billion decrease in Personal Income, but here a fortuitous veterans' bonus aided this latter figure by close to $1 billion. (These figures do not balance exactly due to other minor items in the set-up). Naturally, Personal Consumption Expenditures declined about $11 billion.

In 1931-32, the picture was even more bleak. Total GNP was down about $16½ billion. As usual the government sector was closely in balance, being down only $½ billion. Business Savings were no longer available to take up the slack, so they could only decline about $1 billion, and the whole brunt fell on Personal Income which fell close to $15 billion, causing a personal consumption decline of about the same amount.

GNP Decline Balanced by GNI

I hate to throw these figures at you like this. I know they don't mean much when heard without reference to the statistics themselves; but what I want to point out is that here we had very substantial successive declines in Gross National Product which had to be balanced by equal declines in Gross National Income and we had three important sectors at work: the government, business, and the rest of the people. The government sector was a much smaller part of the whole then than now, but much more important was the fact that of the government's tax take, a much smaller percentage came from income and corporation taxes.

In the decline in GNP, from 1929 to 1932, the first great stabilizer was Corporate Profits, which as we have seen took one-third of the rap in 1930, about one-fifth of the rap in 1931, and very little of the rap in 1932. In actual fact, from 1930 on, businesses generally ran their profits in the red; i.e., they paid out in dividends, etc., more than they made, thus eating drastically into past reserves, and in 1932, in fact, paid out in excess almost as much as their capital consumption (or depreciation) allowances. Had they not been able to do this, the depression would have been even more drastic in the decline of Personal Income.

Contrast: 1957-58

Let us now contrast this with the 1958 recession to see how basically different the situation really was. Between the third quarter of 1957 and the first quarter of 1958, GNP dropped $17 billion at annual rates, or at a rate of $34 billion per annum, or about 7%. This was not as large a decline as between 1929 and 1930, when a comparable figure would be about 15%, but it was large, nevertheless.

Obviously, if we had a $17 billion decrease in output

in these six months we had a $17 billion decrease in gross income. Here, however, we see the great difference. This $17 billion decrease in income was made up as follows: (a) $8½ billion in the government sector (declining tax take, mostly); (b) $6 billion in corporate profits after taxes; and (c) $2½ billion in Personal Income. This latter was reinforced however by $2½ billion of transfer payments with the result that personal disposable income only dropped $1 billion, and consequently Personal Consumption Expenditures only dropped slightly less than this amount.

This, I suggest, is the acme of contrast with 1929. In 1930 we had a $15 billion decrease in output and a consequent $9 billion decrease in personal disposable income with the balance being lost from business profits, whereas in 1958 we had a $17 billion decline in output and a mere $1 billion decrease in personal disposable income. In 1929 Personal Consumption Expenditures dropped $8 billion more or less in line with Personal Income; in 1958 Personal Consumption Expenditures dropped $1 billion also, more or less in line with Personal Income. Put in another way, in 1930 for every dollar decline in GNP and National Income there was a sixty cent decline in Personal Disposable Income, whereas in 1958 for every dollar decline there was about a six cent decline in Disposable Income.

Personal vs. Impersonal Economic Elements

In effect then, the 1929 depression resulted in a great decline in the *personal* aspects of income and consumption, whereas the 1958 decline was almost entirely *impersonal* in its impact. The slack in 1958 was taken up (a) by a sharp budget unbalance on the one hand, and (b) by a sharp decline in corporate profits. The man in the street was virtually not affected. It is no small wonder then that the impact of a recession today is far different to what it would have been 30 or even 20 years ago.

GOVERNMENT POLICIES TODAY AND YESTERDAY

This then is part of the story. It is, however, not the whole story. In 1929 what theories there were as to using government fiscal or even monetary action were of no practical import and were of the wrong sort anyway. Ideas such as preparing massive government spending projects, WPA's, etc., were slow in materializing, and in any case were ineffective unless the government was prepared widely to unbalance the budget which it was not. After the stock market crash in 1929, Herbert Hoover did display a certain degree of economic statesmanship when in the late fall he reduced income and corporation taxes one percentage point, but this was largely ineffective as these taxes were very low anyway in today's terms and the extra purchasing power given out by this gesture was largely lost in the shuffle.

Throughout the depression years from 1930 to 1933 Hoover persistently hammered publicly at the importance of a balanced budget. Some help to the economy came in 1930 from the veterans' bonus, enacted prior to the depression and therefore no act of fiscal foresight, but thereafter the government made things worse by increasing taxes in 1931, and in 1932 at the bottom of the depression, made a large increase in taxes which became a veritable blow to any hope of getting the economy off ground in a big way. Incidentally, in case anyone wants to take political sides, it should be pointed out that Roosevelt did exactly the same in ensuing years, increasing taxes in every year from 1933 to 1938, thereby tending to stabilize the economy all right, but at a low level. It may have been these experiences that influenced both Maynard Keynes and Alvin Hansen in their equilibrium theories. Only from 1939 on did this annual budget balancing dogma give way.

We have seen so far how diametrically differently the economy works today from 1929, more especially in the larger size of the government sector which inherently does not make the economy any more stable than it was in 1929, but which by the nature of the tax-take—i.e., the increasing importance of high and progressive personal income taxes and the 52% corporate income tax which literally puts the government in partnership with the business world at the net profit level—adds a great stabilizing factor to Personal Income which it never used to have. Deficits of course are not good in and of themselves, but they do take the pressure off Disposable Personal Income, and therefore tend to keep Personal Consumption Expenditures on a much higher plane than they would otherwise be. Similarly, it is far better for society in general that a good part of the slack comes in a recession from a decline in corporate profits rather than from a decline in wages, etc., provided only of course that the government does not accept the help from the corporate sector in a recession, and then attempt to tax away any recovery of these profits in an ensuing boom.

THE REALM OF MONETARY POLICY

Let us now look at action in the other field of control, which it is claimed might have helped soften the blow of the 1929 depression, and which would certainly now be used massively if a similar situation arose. I refer of course to overt action by the monetary authorities. There is little doubt that the decision of the Federal Reserve Board to pursue an easy money policy in 1927 aided the growth of speculation in the United States. The story is well known. England had returned to the gold standard in 1926 under the leadership of Winston Churchill, the Chancellor of the Exchequer—equivalent to Secretary of the Treasury in the U. S. In order to encourage an inflow of funds into the U. K. (the pound having been stabilized at the over-valued rate of $4.86 2/3) Montagu Norman, the Governor of the Bank of England, convinced the Federal Reserve authorities that keeping the rediscount rate here low would prevent money flowing from England to the U. S.

In actual fact, however, it probably did the reverse. With a low rediscount rate, a pyramid of easy credit began to build up internally in the U. S. and the rising stock market encouraged the flow of funds to New York. But it is also entirely questionable whether, had

the Federal Reserve followed a tighter rediscount policy, the same thing wouldn't have happened anyway. It is not generally realized how little ammunition the Federal Reserve really had. As we all know, the main instruments of credit policy are: (a) the rediscount rate; (b) open market purchases or sales of securities; and (c) changing up or down of member bank reserve requirements. The rediscount rate is simply a negative type of control. You keep putting the rate up until it hurts. But if a bank needs funds the difference between 5% and 6% is really psychological. If the same bank can get 10-20% in the call market, only its puritan instinct will prevent it from borrowing at the Federal Reserve at 5%, or 6% or even 7%.

Effect of Government Securities

The second area of control is of course open market activities. To tighten credit the central bank sells securities which destroys member bank reserves upon which credit can be extended. In the 1920's however, the Federal Reserve had very few securities to sell. From 1919 through 1929, holdings of U. S. governments tended to fluctuate around $300 million, occasionally running up as high as $600 million (1922) or down as low as $25 million (1924). If we equate these modest figures with the money supply of the time, taking $50 billion as a good round figure representative of the 1925-29 period for deposits and currency, we find that these government securities only amounted to 6/10 of 1% of the money supply. Contrast this with 1959 when we find that U. S. governments held by the Federal Reserve total about $25 billion which represents no less than 10% of the $250 billion of deposits and currency.

It can clearly be seen that not much tightening of credit could have been accomplished in the 1920's by open market operations. There just would not have been enough securities to sell. This left them the other area of control that might have been useful in the 1920's, that of raising reserve requirements. Unfortunately this was out, since it wasn't till 1935 that the Federal Reserve was allowed to revise reserve requirements upward from the fixed minimum and maximum which had hitherto been imposed.

Viewed in this perspective then, the Federal Reserve Board may well be exonerated somewhat from taking all the blame. True it might have raised its voice in warning more frequently and more often, and it might have raised the rediscount rate earlier. (After reducing the rate from 4% to 3½% in August 1927, the Federal Reserve Bank of New York raised the rate to 4%, 4½%, and 5% in 1928, and in mid-August 1929 again raised the rate to 6%). But as to being able practically to control the speculation of the late 1920's with the powers at its disposal, all reason suggests that it was completely over its depth. However somebody had to be the goat, and apparently economic and monetary historians have to blame it on the Federal Reserve 1927 easy money policy, failing completely to explain why these very negative easy money actions in 1927 should have produced the greatest boom on record, when very positive easy money actions in the 1930's produced a complete dud.

Just as for deflationary action the powers of the Federal Reserve seem in retrospect singularly unimportant, so too once trouble began to raise its ugly head, it appears that the Federal Reserve was not one in those days for using "massive intervention." One wonders in fact if the authorities in those days had any real idea of what the system could do if it wanted to. Take 1929 for instance. After a very feeble and watered down statement in the spring about how the Federal Reserve System's duties were not to allow speculative credit to take away from legitimate credit needs, no further action was taken till August, when, as we noted, the New York rate was raised to 6% from 5%. (None of the other districts bothered to follow suit). Then came the crash. From the spring of 1929, government holdings had fluctuated around $150 million, and in the week ending Oct. 30 were increased from $136 million to $293 million. During this week the House of Morgan had formed the famous (but abortive) banking pool to support the rapidly falling stock market with a fund which has been variously estimated as from $50 to $250 million dollars. Thereafter, Federal Reserve holdings were gradually increased to $500 million at the end of December 1920, and remained in this area thereafter, moving up to $700 million at the end of 1930, and to $800 million at the end of 1931.

These figures frankly are a drop in the bucket.

It is true of course that during all the dreary depression years the amount of credit extended by the Federal Reserve was tending to climb, particularly after mid 1931, but this was due more to the increased discounting and sales of bills to the Federal Reserve, actions taken not by the Federal Reserve but on the initiative rather of the member banks. Only in 1932 did the Federal Reserve, starting in April, really begin to increase credit actively by purchase of $300 million of governments in one month, a further $300 million in the next month, and a further $300 million in June of that year. This apparently proved to be enough to stem the stock market tide, but did not prevent in any way the banking crisis of late 1932 which resulted in the closing of the banks in March, 1933. It was obviously much too little.

Let us put it this way. In order just to offset the outflow of gold of $700 million from August 1931 to bank holiday, and the outflow of currency from the banks of $1,500 million in the same period, the Federal Reserve would have had to increase its U. S. governments $2,200 million from $700 million to about 3 billion. In actual fact it only increased them to $1,800 million, or about $1,100 million — approximately 50% of what was required.

Looking back from the perspective of 30 years, one can only wonder at the timidity of people in high places. It almost seems as if there was a great conspiracy to do nothing both in the fiscal and in the monetary field. Nobody had any guts.

OTHER OUTWARD DIFFERENCES

So far I have said nothing about the obvious comparisons of non-self-liquidating collateral loans, 1929 and now, nor have I mentioned the general improvement in quality today in such fields as mortgage loans which are now being paid off on the basis of an equal payment of principal and income. Again while there are dangers today in the high level of consumer credit, this too is self-liquidating, and while it could undoubtedly be an important factor in causing a down-turn in corporate profits, it is doubtful if it would be too important a factor in causing a decline in personal disposable income. Again I could spend hours discussing the whole 1929 market situation: the role of the investment trusts in channelling funds out of savings into the stock market; the role of corporate funds in taking advantage of the fantastic rates of return in the call market; and the role of dividend policies in forcing a decrease in capital expenditures in favour of maintaining security values in pyramided situations—all this and much more could be told.

I would like to mention the foreign situation in 1929, because here again was another Achilles heel which may yet appear in another form in future years. During the 1920's, as during the 50's, the U. S. had an export surplus. The only way that this could be balanced was for the rest of the world to give the U. S. either gold, or debits. While gold remained fairly constant during the 1920's around the $4 billion mark, the real balancing item was the willingness of U. S. investors to invest abroad large sums of money mostly to foreign governments in Europe and South America. When the stock market broke in 1929 and subsequent years, American investors were no longer in the mood to, nor able to, continue to fill the gap by more loans abroad. With this gap removed, foreign countries had to trim their imports from the U. S. and another downward cycle was initiated. In mid-1931 an international banking crisis came to light. With the failure of the Credit Anschstadt in May 1931, foreign short-term balances were called home, London and Paris to Vienna, and from the U. S. to London and continental money capitals. World War I reparations, which had become untenable under the Dawes Plan, now became untenable under the Young Plan. Only American investing abroad anyway had made these payments possible. In one short year, gold which had built up to $4,800 million in the U. S. in mid 1931 fell by one third to $3,600 million by June 1932, thus gravely depleting bank reserves.

Effect of Currency Hoarding

At the same time, grave uneasiness at home resulted in a wholesale move toward currency hoarding. Money in circulation rose from a normal $4.2 billion in 1930 to a peak of $6.3 billion in February 1933 just before bank holiday. Every dollar of gold outflow and/or of currency outflow from the banks means a dollar of decrease in member bank fractional reserves. And every dollar of decrease in member bank reserves, when there are no excess reserves to call on, means a multiple decrease in commercial bank credit, i.e. deflation on a big scale.

As we saw, just to keep even from August 1931 to bank holiday, the Federal Reserve needed to buy about $2.2 billion of governments in the open market. It did not do so, with terrifying results to the banking community.

If there is any conclusion to be made from all this experience of the 1930's it is simply that such a policy of inaction in the fiscal field, as well as in the monetary field, is quite inconceivable 30 years later. We can rest assured at least by the financial peregrinations of the present day Governor and Board of the Federal Reserve that no such inactivity and ineptitude is likely. We cannot unfortunately be anywhere near as sure when it comes to enlightened fiscal policy. In fact we have the dread feeling that if we leave this vital matter to Congress it may be thoroughly botched. But at least in the fiscal field we have two vital automatic stabilizers which have proven their worth in every recession in the post-war period; and these are the role of corporate profits, and that of government tax revenues in taking up the vital slack in any reasonable recession, so that personal income and personal expenditures can be reasonably maintained under circumstances of a fairly short and sharp economic recession. In a longer run deflation, we do not really know how these would work out, but we do know that the situation is much better than it used to be.

THE FINANCIAL POSITION TODAY

I have pointed out that despite certain unstabilizing elements such as the great growth of government expenditures and the difficulty of turning them on or off for control purposes, we do nevertheless have some very important response factors in corporate profits and the fluctuating government tax-take which tend to make our economy inherently much more stable than in 1929.

We also have not yet built up our private sector debt structure, and in particular bank loans, as high as they were in the 1920's. During *all* the 1920's, not just 1929, total bank loans were around 70% of total deposits and currency. Today, total loans amount only to 52% of total deposits and currency. Obviously the situation is far sounder.

What is particularly encouraging however today is not a consideration of these absolute levels but a realization that today, while fiscal policy seems difficult to get understood on the part of our legislators, at least there are some automatic stabilizers which even they cannot fully abuse; and that in the realm of monetary policy and potential actions we have certainly more enlightenment than 30 years ago.

We have made some long-range studies of bank reserves today and in the 1920's and they fully bear out the contention that in the main the only great powers that the Federal Reserve had in the 1920's, were those of "exhortation" and we all know to what avail exhortation is when the horse is out of the stable with the bit in its teeth. Today we don't rely on exhortation. We

can cripple the economy overnight if we wish by judicious or injudicious action.

Studies we made, of banking reserves show that if you add together all the banking resources (except bank capital) and all the elements which increase or add to bank reserves, and if you add together all the commitments of these funds plus all the elements which decrease or take away from bank reserves you ordinarily come out with a net positive figure. Not so, however, from 1928 on through 1932. Here you come out consistently period after period with a negative figure. Small wonder then that the banking system itself was such a deflationary element in all the great depression. It needn't have been so perhaps, but it was nevertheless.

Situation Differs Today

Today we face an entirely different prospect. Wise economic and banking statesmanship should be able, with the tremendous monetary and fiscal resources on hand, to keep us away from the shoals of a great depression. It is unlikely however to keep us away from important business recessions.

I mentioned earlier the Achilles Heel of the foreign situation in 1929 which might come back to plague us in future years. Commentators of late have paid especial attention to the growth of foreign short-term claims now over $18 billions and rising rapidly which are a call on our gold supply. Since we have to maintain 25% in gold (a ridiculous anachronism dating back to when private citizens could demand gold for their currency prior to 1933) against combined Federal Reserve Deposits, (mostly member bank reserves), and currency outstanding, conceivably a run on these liabilities could reduce gold below the legal minimum and hobble any easy money policies in a period of major liquidation. We should not overlook the possibility that this could be so, in which case, as in the 1930's, many of our economic stabilizers such as freedom to pump-prime might be turned into destabilizers, where Federal Reserve policy instead of "leaning against the wind" might be forced to lean with the winds of forced liquidation. Thus we are more dependent now on economic conditions abroad than we have been since the great crisis of 1931. But on the other hand, we have far greater banking reserves to play with today than we had in the 1920's.

On balance, however, and on the record so far, we have every reason to believe that neither fiscal nor monetary authorities will stand by idly as they did from 1929 to 1932 watching the facade fall apart without a tangible gesture of comprehension of what goes on.

MARKET'S STRENGTHS AND WEAKNESSES

In conclusion, I want just to remind you that we can have trouble in the stock market and not ever to forget it. My own judgment is that this trouble is likely to develop in later years rather than at present, but that would be another complete subject for discussion. We have great strength in the demand side of the securities business, the professional recognition that inflation may have to be lived with, and that stocks at 3% are still better than bonds at 6% if the monetary growth factor of dividends and capital appreciation approaches 7%.

And we have favorable arresting factors to a too rapid increase in the supply of stocks by our tax structure, which makes a 6% bond in a corporation as good a bet tax-wise as a 3% stock, from the issuing corporation point of view.

On the other side, the stock market today is awfully thin. Burton Crane in his recent "Sophisticated Investor" has documented this in adequate fashion. The facts are that the specialists today are undercapitalized. It is doubtful if they could handle 15 million share days on the downside. But they may have to try some day. Today we have over five billion shares listed on the N. Y. stock exchange in about 1,600 issues. In 1928 we had only 600,000,000 shares listed.

In sum, there are a lot of pros and cons as to the argument: Can we have another 1929? Frankly in today's economic environment it seems unrealistic to anticipate anything as devastating or as lacking in economic statesmanship as the way we handled the 1929 depression. It would take wholesale blundering of the greatest magnitude to produce a deflation of this character, today. Yet along with the stabilizing elements have grown up certain economic destabilizers, and in particular we should expect in future years a recurrence of wide swings in stock prices, as the economy becomes more "loaned up" and more subject to outside international events than it has been to date.

On balance however I think I am very much happier to be living in the environment of 1959 rather than in that of 1929.

The Investment Climate

by Dr. Beryl W. Sprinkle

Economist, Securities Analysts Department, Harris Trust and Savings Bank

PERHAPS THE MAJOR ECONOMIC FACTORS affecting investment results are prospects for economic growth, the short-run business outlook, and some major longer run factors—including the changing nature of the U. S. business cycle and its implications for inflation.

Lest recent discussions create the impression that the U. S. economy is mature and stagnant, it is well to recall that in the past half century, growth in output has averaged 3% per year, whereas in the postwar period there has been a one-third improvement to an average pace of about 4%. Increased production has yielded the world's highest living standards and poverty is no longer a general problem, but is isolated to a few exceptional areas and individuals.

Recent discussions have had the desirable effect of focusing attention on the source of past and future growth—incentives to save and invest in both human and physical capital. School boards and universities throughout the nation are attempting to improve educational opportunities for our children. These changes will inevitably reflect favorably on our growth trend in

coming years. Nor are we unconcerned about the conflict between many public policies and the desire to increase our physical investment. We are coming to realize that the American economy can no longer afford such wasteful luxuries as protective tariffs, Federal support of retail price maintenance, barriers to the free flow of resources from the American farms to the industrial sector of our economy with the consequent staggering subsidies, tax deterrents to investment, monopolies in either industry or labor, etc.

Although a democracy typically makes changes slowly, we are now willing to discuss our shortcomings and in some cases have made the necessary changes. More will be forthcoming. Because of a renewed willingness to face up to the real problem of growth and to recognize that we can have more growth if we are willing to pay the price, I am optimistic about the future long-run growth pattern of the American economy, assuming we can avoid war. A recent estimate by the National Planning Association (the most experienced and successful organization which makes such projections), suggests the strong probability that by 1970 the value of our total annual production should be about $800 billion measured in 1958 dollars. If such a target is achieved, it will be necessary to grow at about a 4.2% rate annually, only slightly higher than in recent years. Such growth suggests ample opportunity for successful private investments.

Short-Term Outlook

But we must remember that growth is irregular. In the past year, real economic growth has been about 9% —over twice the normal increase. Sensitive indicators, patterns of past business cycles, as well as prospects for spending, all suggest that a recession is not imminent. Late 1960 or early 1961 would be the most likely time for the next recession. The main sources of strength for the coming business rise are likely to be capital spending and consumer outlays in contrast to the sharp stimulus from inventory change in the past year. 1960 on average promises to yield another all-time high year in total output, employment and well-being.

Among the apparent important institutional changes is the fact that we have not suffered a major economic decline in the past 20 years. Many expected such a decline to develop in the post World War II period, and the failure to do so was often explained by reference to special pent-up demands. Yet that explanation cannot explain the brevity of the 1957-1958 recession. I am inclined to think that the proper explanation lies in improved knowledge of the causes of major economic declines, and perhaps more important, an increased willingness to use the tools available—primarily monetary and fiscal in nature. The vastness of the change that has occurred becomes clear when we remember that in the great depression, Congress raised taxes and the Federal Reserve allowed the money supply to decrease by one-third from 1929-1933. Those actions demonstrated beyond any reasonable doubt how inappropriate public policies can nearly wreck the economy.

Contrast those actions with present-day policies of resorting to substantial government deficits and an easy money policy during business recessions. Furthermore, Federal insurance of bank deposits largely eliminates the threat of a liquidity crisis resulting from currency withdrawals similar to what has occurred in previous periods. Both major political parties are dedicated to maintaining full employment of resources and will use the tools available for preventing prolonged depressions. The best planning assumption is that we have eliminated great depressions. They were man-made and it should not be surprising that man can prevent them.

But we have not learned to prevent recessions, and perhaps it is too much to hope that we ever will. Several lags complicate this problem: (1) the lag between need for Government action and its recognition; (2) the lag between recognition of need for action and the taking of action; and (3) the lag between taking action and its effects on the economy.

Cyclical Behavior Cited

Consequently, for planning purposes we should expect the business cycle to continue. Therefore, it behooves us to understand typical cyclical behavior of investment media. We know that interest rates have tended to peak and trough with the business cycle in past periods. This relation has been even closer since 1951 when a flexible money policy was adopted. The reason for rising interest rates in a period of boom is twofold: a rise in demand for funds, and a restrictive monetary policy designed to prevent sharp increases in the money supply and consequent inflationary pressures.

In a recession, both demand and supply forces cause lower interest rates. This typical pattern means that interest rates and bond prices are likely to continue very unstable over the business cycle. We can no longer consider bonds as fixed value investments. Counter cyclical management of bond maturities has become a challenging and potentially profitable investment problem.

We also know that stock prices typically anticipate the business cycle by an average of seven months. This means among other things that short-run business cycle forecasts are largely useless as a guide to stock investment. Good stock purchases are most likely to be made during the descending phase of the business cycle and good sales are to be made while profit and employment prospects are uniformly good.

Although inflation continues to be a problem in the American economy, and proper financial policies are necessary to prevent more serious dangers in the future, it appears likely that many investors over-estimate the severity of this danger. Since the adoption of a flexible monetary policy in 1951, the average annual rise in the price level has been about 1%. This compares with a rise of more than 5% in the early postwar period, and about 3% on average for the past half century. Furthermore, it appears certain that our price indices are biased upward largely because of failure to adjust for quality improvements in goods. If the indices are

biased by as much as 1% a year, we have had no inflation on average for the past eight years. This good record has been due largely to the fact that the budget is usually balanced in periods of good business and the pace of monetary growth has been limited to the rise in total output. Clearly, the problem that most of us have in our household budgets is not due primarily to inflation. Our problem is not so much the *high cost of living* as it is the *cost of high living*. Fortunately, we are living better. We have more and better food, clothing, housing, more children, better schools, better durable goods, etc. We should not confuse a higher standard of living with a higher cost of living. Fortunately, most of our budget increases in recent years have been due to the former and not the latter.

Prices typically do not decline in recessions, and the pattern in the 1957-1958 downturn was similar to the pattern in prior modest recessions. Periods of great price decline in this century were 1920-21, 1929-33, and 1937-38. You will recognize each of those periods as severe depressions. We have not recently suffered severe depressions for the reasons stated earlier; consequently, the price level has not declined.

The modern day downward rigidity in the general price level makes it doubly important that we follow sound money and budget policies during periods of business boom when we typically get price increases. Price rises are not likely to be offset by later declines. A balanced budget and a restrictive monetary policy are critically necessary for price stability in the months ahead. However, unless we abandon our present flexible monetary policy, the prospects for future years are for only modest inflation, if any. Consequently, careless stock investment in the belief that eventually you will be bailed out by subsequent inflation, is likely to turn out poorly.

Outlook for Bond Market

by Russell A. Kent

Vice-President of The Bank of America

THE OUTLOOK FOR THE BOND MARKET, and interest rates, are claiming much attention today in financial, business and government circles. And, coming up with a forecast is seldom an easy task, even under the best of circumstances.

Indeed the task of forecasting interest rate trends, and bond market conditions, has become quite difficult in the last decade, compared with the previous one, for two principal reasons:

First, because we have been operating to a large extent under boom conditions punctuated by only brief recessions; and second, because monetary policy has been employed as the prime means of regulating fluctuations in the level of business activity.

To begin with, any forecast starts with a projection of the past into the future. However, since history never precisely repeats itself, we must go beyond this and try carefully to evaluate the particular pattern of forces that appear to have primary significance for the period of our projection into the future.

With this in mind, I looked back over the last century to see what clues history might provide regarding the long-term trends in interest rates and security markets. I was struck with close association between the three factors that are claiming a good deal of attention today. I found that until the decade of the 1930's, *interest rates, price movements,* and *the level of debt,* particularly Federal debt, all moved in a quite predictable way with regard to one another and with regard to the general level of economic activity. Generally speaking, all three moved up during war periods but adjusted down following both the Civil War and World War I.

However, the stock market crash and the decade of the 30's brought many changes in our economy. One of the most interesting was the profound changes that occurred in the historical relationship between interest rates, prices and debt. During this period the three no longer moved together as they had in prior years. Ruling out the four years between 1929-1933, we find that the Federal debt began to rise, and with it so did prices; but interest rates continued downward under the influence of a liberal monetary policy induced by a less than normal rate of growth in our economy.

Rise Cited in General Trend

During World War II the Federal debt soared, while prices were held in check largely by direct controls. And although interest rates were low at the beginning of the war, they were further depressed, almost steadily, during the period of war financing. Following World War II, the traditional relationship between these variables failed to emerge. Instead of seeing declines in interest rates, prices and Federal debt, as after previous wars, we have seen all three follow a generally rising trend in the last decade.

Having reviewed this history, it seems to me it gives us a fairly good insight as to what is likely to be expected in the future. Hence, if we assume that the government is going to play a dominant role in stabilizing production, income and employment at generally high levels, as it has in the recent past, we should also be able to assume that over-all debt, interest rates and prices should remain at high levels. Other things being equal, a commitment to full employment policy seems to imply this trend. It also means that major emphasis must be placed on monetary policy to help regulate the level of activity. This seems necessary since fiscal policy, given adherence to full employment policies, is likely to prove inadequate to bring about a budget trend that would permit a large reduction in Federal debt. Let me hasten to add, however, that this does not mean that interest rates will rise indefinitely. It does, however, seem to imply that, although interest rates will fluctuate considerably over a business cycle, they are likely to remain on the average at comparatively high levels.

These considerations, I think, are helpful in explaining the high level of rates, as well as forecasting the im-

mediate future trend of the bond market. However, before discussing the likely strength of the forces of supply and demand in the financial sector of the economy, a moment's attention should be devoted to a few basic assumptions upon which my forecast is built.

First, I assume that, in spite of the recent thaw in the cold war, the tension will continue with the result that military expenditures will have to be maintained at about present levels. Second, in spite of the recent and likely continued debate on interest rates and the role of the Federal Reserve, I assume that no significant legislative change affecting either is likely to be brought about. Third, that the current labor-management disputes are settled peaceably and without further significant interruption in production. Fourth, that we will see some renewal of inflationary pressures in 1960. And finally, I assume that the level of economic activity will rise to a new postwar peak this year.

Most important, this boom will result from a continued strong rise in income which encourages record sales of consumers' durables. In addition to this, business investment in both inventories and capital goods also will be a major source of strength this year. And in the Government sector we are likely to see some moderation in the growth of total spending. Given these assumptions, it appears that the demands of credit in 1960 will shape up as follows:

First, business demands for funds should rise from recent levels. However, long-term flotations of bonds probably will remain at about last year's level, in spite of increased capital spending. The high cost of long-term accommodation, coupled with strong demands from investors with regard to call privileges and the like, will tend to discourage its use.

Because investment spending and working capital needs will grow while long-term debt financing remains about the same, business firms will have to rely more heavily on internally generated funds and short-term borrowing in 1960. However, although depreciation allowances should grow, rising costs relative to revenues may squeeze retained earnings. As a result, business firms probably will have to reduce their holdings of short-term Government's and also will have to rely heavily on short-term borrowing.

FHA, GI Financing May Decline

Second, in the area of personal debt, it appears likely that new extensions of mortgage credit will be reduced from last year's level, while record use will be made of instalment financing. In the mortgage market tight money naturally makes pegged rates look relatively unattractive. Although conventional mortgage rates will remain competitive, it seems likely that the use of FHA and GI financing will decline in coming months, in spite of modestly higher rates on these instruments.

But if the public makes less use of mortgage money, the decline here is likely to be offset, in part, by a record use of instalment credit. Although this is not within the realm of the bond market, this development will put pressure on the entire rate structure because of the over-all tight money situation. Sales finance companies, in particular, are likely to make heavy demands for funds. Moreover, commercial banks will be hard pressed to accommodate all demands in this credit sector. Hence, due to the expected continuance of tight money conditions, pressures exerted in the instalment credit area will spread quickly to all other segments of the market.

Finally, in the realm of government finances, it looks like over-all demands for credit should moderate during 1960, relative to what was experienced in 1959. Demands of state and local governments will remain about unchanged from the $8.0 billion in gross extensions expected for 1959. However, with rising rates and tight money, state and local governments could experience new pressures that may reduce over-all demands in this area.

All that remains is the outlook for Federal financing and this is the area that contains the biggest question mark. In the first place, the fiscal outlook is not completely clear. On the receipts side, widespread disruption of production as a result of the strike could throw the budget out of balance. As to expenditures, this is also in the field of speculation, depending to some extent on what Congress does early this year. All things considered, therefore, I feel that a balanced budget in fiscal 1960 is about the most optimistic forecast that we can render at this time. However, even this development would make an important contribution to lessening market pressures, when compared with the $12½ billion deficit we had to finance in 1958.

Not Even a Balanced Budget

But even a balanced budget would not necessarily result in a substantially improved cash position for the Treasury, because it has already mortgaged $7½ billion in expected receipts with the sale of tax anticipation obligations due to mature within the next six months. Moreover, the Treasury will have to borrow heavily during the second half of 1960, when receipts are low. Therefore, it appears that the Treasury will continue to exert pressure on the market, even if the fiscal situation improves, but it will exert less pressure than in 1959.

Considerations regarding long-term financing may depend on the actions of Congress in lifting the 4¼% ceiling on bonds. Meanwhile new interest has been aroused by the spectacular success of the offering, late in 1959 of 5% notes by the Treasury. Although most observers agree that there is not a bottomless well of funds to be tapped outside the institutional market, the huge success of the 5% offering among individuals does seem to increase the possibility of financing a larger proportion of new debt offerings with private investors during 1960. This would be significant if it proved successful, because it would greatly aid the Treasury at a time when banks and business firms will not be capable of greatly expanding their holdings. Additionally, it would also ease the problems of the monetary authorities by reducing the inflationary potential connected with recent debt management operations.

The Treasury's savings bond program represents yet another question mark. The success of the magic 5's probably will put some renewed pressure on the savings bond program. It is hard to foretell what the outcome will be; however, if savings issues do not remain attractive, it will mean more Treasury offerings of marketable issues this year to cover the loss.

Yet another question mark stems from the recent authority granted to the Treasury to modify the tax treatment of gains or losses on security exchanges. Although the Treasury has made no announcements, there remains a possibility that it may attempt some modest prematurity refunding of its debt in 1960. If the market climate becomes favorable it is possible that the debt managers may try for some debt extension. However, given a continuance of tight money and the present ceiling on rates they are unlikely to do much with this new privilege, at least for some time to come.

Treasury Still Faces Problems

This brief review by no means exhausts the problems currently facing the Treasury with regard to the management of the debt. Suffice it to say then, that the Treasury is still faced with formidable problems—even if a balanced budget is achieved. The Treasury will continue to find it necessary to make frequent appeals to investors with short- and intermediate-debt offerings that will find a progressively less receptive market, in most cases, because of an expected further reduction in the over-all liquidity of the economy.

This, then, summarizes the expected total demands for credit in the coming year. If they are added together, it appears that total borrowing will be reduced from last year's level by a modest amount, principally because of reduced extensions in the area of Federal and mortgage debt, and possibly in the area of tax-exempt debt. But although credit demands are likely to be slightly less in total during 1960, it is not likely that this will mean reduced pressure on interest rates. This is so largely because the expected supply of funds also is likely to be reduced.

In the first place, it is unlikely, in spite of the high level of interest rates, that the *rate* of saving in the economy will be as high in 1960 as it has been during 1959. Renewed evidence of inflation, coupled with high confidence and a sustained urge to acquire consumers durable goods, will be largely responsible for a reduced rate of savings.

In addition to this, however, it is unlikely that the banks will be able to expand credit as much in 1960 as they did in 1959. Tight money and large credit demands have already reduced bank liquidity and I doubt if this trend will be reversed in 1960. Let me hasten to add, however, that this does not mean that the Federal Reserve will completely cut off the banks from further growth in reserves. Quite to the contrary, the monetary authorities, in fact, can be expected to continue to provide reserves to meet seasonal and secular needs. Nevertheless, the policy will still be aimed at restricting the over-all liquidity of the economy and thus the current atmosphere of tight money is almost certain to continue through most of 1960.

Hold-the-Line Policy Seen

This basic monetary policy could be frustrated to some extent, however, if the Treasury is confronted with continued difficulties in its debt management operations. Unless it can place securities with individuals and non-bank institutional investors during the coming year, it is likely that commercial banks will be called upon to underwrite at least a part of new debt offerings. Moreover, the Treasury will not have the same success in appealing to the corporate market this year as it had during part of 1959, largely because corporate liability will be curtailed by the factors already mentioned.

These considerations notwithstanding, it is unlikely the government will give way very much on this issue, because of a probable renewal of inflationary pressure. Hence, the monetary authorities probably will deem it crucially important that they do everything in their power to hold the line with an orthodox tight money policy. Indeed, this is the economy's only means of defense, unless private savings increase or the Treasury is able to run a substantial surplus—neither of which is likely, as we have already seen. Given this situation, the Treasury probably will accept the existence of tight money and high rates and will carry out its financing with the best means at hand.

So much for the basic outlook. I would like to conclude now with some observations concerning what all this implies for the trend in interest rates.

At this juncture, the economy is more than halfway through the current cyclical upturn. It is difficult to see the exact magnitude of the advance from here, because of the conditions which surrounded the steel strike, and the Taft-Hartley aftermath is a matter of conjecture. However, we can say with confidence that the early phase of rapid acceleration of economic activity, which was fed with substantial financial liquidity, has now passed. The coming phase will see the economy rise further, but at a slower pace, once the immediate post-strike surge in activity passes. The period ahead will see a continued reduction in the liquidity of the economy, but further decline in 1960 will not be as great as that which has been experienced in the last 17 months. Nevertheless, the low state of liquidity this year will make the economy extremely sensitive to shifting supply and demand forces, and this will have a direct bearing on all security markets.

Given these considerations, what is likely to be the shape of the yield curve in 1960? In response to this question I would imagine, first, that the short end of the maturity spectrum would see a further rise in rates in coming months to new postwar highs—abstracting, of course, from seasonal shifts. Indeed, relatively speaking, the greatest movement in rates is likely to occur in this area because the heaviest demands will be concentrated here.

Second, I would assume that the intermediate sector of the curve will also be under pressure, in part, because

the Treasury will try to place a large part of its new offerings in this area. However, the debt managers good intentions notwithstanding, the success they have in enlarging intermediate debt outstanding will depend in large measures on how individual investors react to high rates. In this regard, it is obvious that the recent offering was indeed a success. In addition to this, however, the intermediate range will also be under pressure, since the banks are likely to attempt to satisfy a part of their heavy credit demands by further sales of intermediate Treasuries under conditions of reduced liquidity. But the reduction of commercial bank holdings of maturities in this range this year should not be nearly as great as that which was experienced in 1959.

Long-Term Rates: On the Rise

And finally, I would assume that long-term rates may rise further in 1960. Subject to the direction of debt management operations by the Treasury, there is a good likelihood that long-term rates will reach a plateau following mid-year and could even begin to descend before the end of the year, depending on the outlook for business in 1961.

In general, then, I foresee a continued rise in interest rates well into 1960 which will bring a downward pressure on the bond market. This development, I think, would be in keeping with the historical trend which I reviewed here earlier. And looking beyond 1960, although interest rates are sure to fluctuate—probably widely—we should expect to see the maintenance of a high average level of rates with all segments of maturities in the bond market reflecting this condition.

Selecting Securities in a One-World Economy

by John P. Chase

Board Chairman and Trustee, Chase Fund
Trustee, Shareholders' Trust of Boston

WE ARE IN ONE OF THE MOST "dog-eat-dog" international competitive eras that the United States of America has ever encountered.

I recall, several years ago, that the Soviet's Nikita Khrushchev said: "At last, we, the Russians, have got the American labor costs up to a level where we can turn the cold war into an economic trade war."

I think that was a very important statement, but nobody seemed to pay much attention to it. We, as Financial Analysts and managers of people's money, today *must* give heed to it at this juncture. I think that we all must realize that the labor costs in this country—during the last decade—have gone up very steeply, and I think we must also recognize that during this period, we have been in a seller's market without any serious competition from any other source. In effect, we have been the only nation that had its industrial production capacity in being.

Russia, at the end of World War II, knew this. Russia knew also that a big deferred demand existed in this country that had to be met; and she also knew that we were going to be called on to help our allies to bridge the postwar economic gap. But Russia didn't know that the Marshall Plan, as such, was forthcoming. The Soviets also knew that we would help Europe rebuild its industrial plant capacity.

All of these things we did; we had a Roman holiday for ourselves. It didn't make much difference what labor costs were because we could pass them on, and if the Europeans didn't have the money to pay, we loaned it to them. So again, it made no difference. And so, we accomplished exactly what the Russians wanted us to do; namely, increase our production costs.

Some economists have said that the fact that our labor costs today are much higher than the European labor costs, shouldn't concern us because that spread was even greater 10 years ago. My answer is, it didn't matter what the spread was 10 years ago because Europe had no productive capacity anyway to compete with us. It's only been in the last year or two that our high labor costs have been exposed, and now we find ourselves in mortal economic combat, not only with our friends in Western Europe, but with Russia also.

Interest High in Common Market.

Carrying this one step further: two years ago, we opened an office in Geneva, not to do business over there so much at the time, but because we felt the coming of the Common Market called for an on-the-spot analysis of values in that low labor cost area. Since then, we all know there has been a stampede of U. S. business trying to acquire, through acquisition or construction, their own plants in the Common Market area. I think we all recognize that the Common Market area has a population virtually equivalent to the U. S. population, and if you include the so-called "outer seven" with the "inner six", you would almost double the population of the United States.

Here, I believe, is the makings of a tremendous growth factor. I believe, if we're going to do a good job for the people whose money we manage, we must broaden our horizons in analytical and research work, and make sure that when we are doing our selecting, we give due consideration to investment opportunities outside our own confines, and make sure that there may not be greater values elsewhere than within the United States itself.

I think we've become so accustomed to thinking that the U. S. was the only place in which to invest money, that we have tended to neglect the opportunities that may be emerging elsewhere in the world. Now, I realize that there are many prejudices at the present time to investing outside of this country. Just to mention a few: currency stability, political stability, the question of moral integrity, and then, there has been the question of economic growth, itself. These prejudices are deeply ingrained. We've lived with them most of our lives, and my only purpose today, is to focus attention on, per-

haps, a changing scheme of things outside of this country that makes it worth while reconsidering whether those prejudices are still valid.

As far as currency stability is concerned, if you speak to the Swiss bankers, why, they're very much more concerned about the U. S. currency stability than they are about the German, or the Swiss, or for that matter, the British. And for the first time since World War I, the French franc, at its devalued level, is selling at a premium over the U. S. dollar.

I think that on this score, the convertibility of other currencies has now reached a point, and the gold backing of those other currencies has reached a point, where this particular prejudice, at least for the time being, is unwarranted. It seems to me, the trend is in the other direction. The shoe, apparently, is shifting to the other foot. Our trade balances are turning adverse, the withdrawal of gold reserves is threatening our very credit structure, and thus I think this doubt of foreign currency stability may be very much over-played.

From a social and political stability standpoint, it's been very clear in recent years that the European peoples as a whole have learned their lesson about Socialism. I'm not sure whether we have. The British election results tend to confirm this thesis. Socialism, as we have thought of it, in its more extreme forms, is dead. I don't think any Englishman any longer fears the nationalization of the British steel industry. I'm sure when you travel in Germany and talk to the people there, they have a very live understanding of what inflation really means, and they're willing to make certain sacrifices in order to prevent a recurrence of those vicious inflationary trends.

Europe's Growth May Top U. S.

We in this country, have not been through an inflation of the type that the Europeans have experienced. It's been a rather painless process as far as we're concerned, except for those who happen to have all their money in government bonds, savings banks, fixed annuities or pensions.

Now, I feel also, that this question of rate of economic growth, which is one of the things that has tended to concentrate investment interest in U. S. and Canadian securities, may well dictate a fundamental revision of thought. My own belief is that the economic growth, within the United States in the next decade, is not going to be as great as it's going to be in Europe. We have been way ahead of the Europeans in our development, in our industrialization, in our use of credit, and in many other forms of "boot strap" operations that have created a forced draft on our economic growth.

I think we have reached the point where we are not going to be able to grow quite as rapidly, in spite of the population curve that we're all familiar with. We have reached a point where we've gone through the one-car per person to the two-car, and now, we're struggling for the little car and trying to get three in the same garage that was built for two. I don't think the growth potential in this area is anything like what it is in Europe, where the percentage of people that own one car or two cars is still small and yet, where the mass purchasing power is at last beginning to develop.

Now, this question of mass purchasing power, is terribly important. You couldn't have mass purchasing, as we know it, in Europe so long as there were tariff barriers separating all the various segments of Europe. It's exactly as though we had had every state in the U. S. levying tariffs against every other state. We just wouldn't have ever brought into being our mass production techniques which we have (happily had), during a good part of our industrial history. Now, this same mass production technique is emerging in Europe, and it's emerging because of the mass market. And so again, we are losing the advantage that has been uniquely ours, of mass production which again has camouflaged our labor costs. Our labor costs, on the average, run from double to four times the European comparable figures, and eight times what they are in Japan.

Many people stress the point that we are much more automated than most of the European companies. I spoke to the chairman of the biggest electrical company in England last May, about this and he said: "Why should we automate further, until our labor costs force us to do so. We still have the leverage that we can use at the proper time. We can still automate when it's cheaper for us to do so; but at the moment, with our labor costs where they are, it doesn't pay us to go further than we have."

Some European Plants Superior to U. S.

Talking about modern machinery and plants, one has only to look to Europe where such has been built absolutely new from the ground up. They won't take second place to anything we have in this country today. It's true, that in some categories, Europe's quality is not up to ours; but in categories, I think it's superior. We're going through a technological revolution; and in this process, the countries with the highest cost of labor may be in the most difficult position to withstand the shock of bridging the gap from one type of economy to the next. Europeans may be able to do it easier than we and with less political and social repercussions.

Now, if these points that I have raised here are valid, then it behooves all of us, from an analytical standpoint, to apply the conventional yardsticks such as times earnings ratio, cash flow, percentage spent on research, return on capital, financial strength, competitive position, growth potential of markets, and labor as a percentage of cost of the finished product—without regard to the geographical location of the individual company. If you take the foreign label off of the subject company you'd have to buy the foreign company rather than the U. S. company.

Our own companies in the United States have more or less, said that this is true because all you have to look at is the amount of money they're spending in order to acquire production capacity in the low labor areas. Now, that's fine and it tends to diminish the impact of foreign competition in so far as these particular companies are concerned. It also, perhaps, serves to

help the U. S. A. as a whole because as we go into Europe, or elsewhere we tend to raise the labor costs by bidding for available labor. Thus, if we can hold our labor costs stable here, we may, in this way, narrow the gap between U. S. production costs and foreign costs. From an investment standpoint, however, even if we buy into those companies which have the European and other foreign productive facilities, we still benefit only in a minor way, due to the fact that they have relatively small productive capacities outside of this country. If you want really to participate in what I believe will be a growth factor in Europe—that will double the growth factor in this country in the next decade — then you must look to the companies that are primarily the beneficiaries, and not secondarily the beneficiaries.

Now, I have talked a lot about Europe, but I don't think it's too late to begin to look elsewhere. Japan and Africa bear serious analysis. I think that Central and South America may be a few years away, but there are certain trends that are very clearly developing in those countries. So, it may be advisable for us to focus our attention, increasingly, in those quarters.

We must recognize one of the factors, so clear today, is that all nations in the world aspire to become industrialized—everyone of them. Some are not anywhere nearly ready for it. Nonetheless, they aspire to do what we're doing here, and what Europe is doing. When we produce machinery and equipment and sell it on credit, or maybe, on a give-away basis, we are providing, in a sense, competition that we must meet ourselves.

Fasten Your Belts—After 1960

Now, I believe the United States economy is in for a period of belt-tightening. I'll agree that the present momentum will carry on well into 1960. Moreover, I think that the peak of the boom has been delayed by the steel strike. But we must be very careful not to read too much into the resumption of economic activity that seems destined to occur—over the next six months—when and if the steel strike is settled. We're coming into a period where, at best, we must try to hold our own and make sure that our costs come down in every possible way. Otherwise, our competitive position in the world, as a whole, is going to be further undermined. If it is, then, not only have we lost the "cold war" in one sense, but we have weakened our position in the Councils of the Nations — from a diplomatic standpoint. History has proven, time and time again, the loyalties of nations tend to follow their trade relations; and that is something that we must be concerned with when we ask for tariff barriers, import quotas, and the like. That is attacking the problem in the wrong way.

In conclusion, selectivity is still the watch-word, and I hope, increasingly, that when we seek stocks for investment, we will not limit our horizon to the securities that are only within the confines of the U. S. A. I think some very real investment opportunities appear outside the U. S. In the long run, we'll be benefiting, and not harming, our own national interests.

History of the Security Analysts of San Francisco

by William M. Bennett

Investment Consultant, Past President
The Security Analysts of San Francisco

FOR YEARS OUR LETTERHEAD has said that the San Francisco Society was founded in 1929 and our annual reports for many years have listed our past-presidents as of 1929. However, our files which are transferred annually, from outgoing to incoming secretary, do not contain any information prior to about 1950, and the matter of dating back to 1929 has therefore seemed to be based more upon general agreement rather than documentary evidence.

We are fortunate in having two charter members still in our group, Daniel Berg and Edgar Kahn, but even here it turned out that their membership was not continuous, and therefore their historical coverage of our record was incomplete. Starting from this background it has, however, been possible to locate each of our living past presidents to ask for records and recollections of the Society's history. There are 29 past presidents of the Society of whom two are deceased, Charles MacLillie, our first president in 1929 and 1930, and Charles Burgess, the 1942 president. Nineteen of the remaining 27 past presidents are still associated with the Society. Some are not members at the present time, but it has been possible to get in touch with each of them. The list of these men follows:

Charles H. MacLillie, 1929 and 1930; Homer Fahrner, 1931; Milton E. Taylor, 1932; John G. Hatfield, 1933; Lewis B. Reynolds, 1934; Eugene H. Gray, 1935; Laurence G. Duerig, 1936; Rudolph ver Mehr, Jr., 1937; Harold M. Phillips, 1938; Ian M. Strange, 1939; Rene L. Rothschild, 1940; and Edward A. White, 1941.

Also: Charles P. Burgess, 1942; Edward R. Bunting, 1943; Morton A. Hocker, 1944; J. Carl Schick, 1945; Douglas R. Johnston, 1946; Charles E. Fagg, 1947; Thomas J. Tasso, 1948; Earl L. Sever, 1949; Richard W. Lambourne, 1950; John R. Beckett, 1951; William P. Held, 1952; John G. Eidell, 1953; Herbert B. Drake, 1954; H. Taylor Peery, 1955; Peter Avenali, 1957-58; and William M. Bennett, 1958-59.

From the records submitted by our early past presidents it has been possible to reconstruct the following story.

In 1928, the year in which the Dow-Jones Average was to close at exactly 300.00 on the last trading day of the year, a group of Montgomery Street statisticians held a few informal luncheon meetings, calling themselves the San Francisco Statisticians.

In March 1929, Charles MacLillie issued an organizational letter to 20 of these statisticians calling for the formation of a regular organization under the title of Financial Statisticians of San Francisco—to meet once a month for lunch. These 20 charter members must have felt that investing was a wonderful game. The Dow-Jones Average had just climbed to 320; trading

volume in March hit 8,000,000 shares on one day; and over 5 million shares for eight days. We have a copy of the letter calling the initial meeting for March 9, a Saturday by the way, at the Nugget Restaurant, 132 Montgomery St. The charge for luncheon was $1 per head and it was necessary to make a guarantee of $10 to get a private room. The formation of this group was also recorded in the August 1929 issue of *Tape and Ticker,* a magazine of the San Francisco Stock Exchange Institute.

The first president was Charles MacLillie, and the secretary-treasurer, Homer Fahrner. There was no vice president, but a program committee chairman was also named. Immediately after this meeting it was decided to meet regularly the first and third Monday evenings of the month for dinner at the Nugget. I'd like to applaud the zeal of this early group by pointing out that a resolution was drawn for presentation at the May 5, 1929 meeting, resolving that the Financial Statisticians of San Francisco instruct their secretary to write to any company for full and correct data regarding its operations upon request by any member, and that upon refusal by the company to give the information requested (without a reasonable explanation), the secretary be authorized to notify the membership of such refusal, and that furthermore, all members shall impart to any and all inquiring investors the fact of this refusal, pointing out that a fair and favorable opinion could not therefore be rendered on its operations. Our second president, Homer Fahrner, tells me that this was adopted. Clearly, these early members had *character* and *zeal.*

Early Meetings Recalled

We have references to some half dozen of the 1929 meetings including notations of speakers from Pacific Gas & Electric Company, and the Simmons Company, as well as a field trip to the Potrero Steam Plant of Pacific Gas & Electric Company.

In 1930 the program included a meeting with the president of the Railway Equipment & Realty Company and a talk by one of the members who had just returned from a 'round-the-Pacific trip.

Various objectives were ascribed to this group in its early days. I particularly like one which went as follows: "The object of this association is to provide a ready means for a closer friendship among financial statisticians." By early 1930, membership had grown to 57, and at the end of the year the Society had a net worth of $159.70. This is from the first financial report available.

By late 1930, eight committees had been founded and a constitution was drawn up and adopted. Dues were set at $15 semi-annually, but by the latter part of 1931, when conditions were beginning to get more and more depressed, dues were cut to $9 semi-annually. Two classes of membership were established in this early constitution: regular members who had the vote, defined as those properly qualified to perform the duties of financial statisticians; and associates, who were non-voting members, and included all others, subject to approval of the board.

Many of our present members might feel that the program must have been rather skimpy in these early days, but the record does not bear this out. In the badly depressed year of 1932, the program included such speakers as a vice-president of Transamerica, the State Corporation Commissioner, and a Stanford Business School professor. On one program, June 20, 1932—when the Dow-Jones Average had sunk to 47.80—one of the members discussed the management of funds in bull and bear markets, and two other members debated the merits of common stocks versus second grade bonds as a buy at that time.

In 1934 membership averaged 25 to 30. The cost of a dinner in those depression days was 75c. In 1935, as best may be determined from the available records, the Society admitted its first woman member, Miss Nello Wilson, who worked for the San Francisco Stock Exchange.

Information Exchanged with Los Angeles

In 1937, a rather notable event occurred in that the Los Angeles and San Francisco societies interchanged roster lists. At that time the Los Angeles Society had 61 members to 36 for San Francisco. This may be taken as our first move toward cooperation with a similar group in another city. It had the purpose of facilitating the exchange of information, and a copy of the Los Angeles roster was sent to each San Francisco member with a notice that he might attend Los Angeles meetings when in that city and that he might get in touch with members of that Society if he wished information about Los Angeles companies.

In 1938 a real highlight of the entire program history of the San Francisco Society occurred when President Hoover was invited to address us at a closed meeting, an invitation which, fortunately, he accepted. It was stated that his remarks would be off-the-record, and the recollection of those who attended is that it was a most stimulating session. Also at about that time the group visited the laboratory of Philo Farnsworth in San Francisco, and had the amazing opportunity, as they stood in separate rooms, to see one another on his experimental TV scope. In 1939 when the Golden Gate International Exposition was held in San Francisco the Society was invited to inspect the new Boeing Clipper on exhibition at the Exposition on Treasure Island.

During the early years meeting places included the Nugget in 1929, the Hotel Stewart Penthouse in 1930 and 1931, the Pig'n Whistle Restaurant on lower Powell Street in early 1932, the Hotel Cecil on Post Street from 1932 to 1937, and the Hotel Alexander Hamilton on O'Farrell Street, from 1938 probably to 1944.

Our information thins out badly in the late 30's and becomes a practical void for the years 1940 to 1949. We do have a 1943 roster which showed a membership of 22, and we have a few references to programs in some of those years. While the membership was small at that time we have a recollection by the 1944 president that "all the members, approximately 20, took an active interest" in the affairs of the Society and the dinner meetings.

Charter Members of the Federation

In May of 1947 *The National Federation of Financial Analysts Societies* was being formed in New York City, with the New York, Chicago, Philadelphia and Boston Societies as charter members. The Los Angeles Society was admitted in August 1947, and in the fourth quarter of 1947, San Francisco's membership was awaiting formal ratification of the Board of Governors of our Society. Apparently there was some feeling at that time that a small society would be "gobbled up" by the much larger eastern organizations, and approval was not forthcoming in time to have the San Francisco Society participate as a member in the first Federation Convention held in New York in March 1948. However, by early March, 1949, when the second Federation Convention was held, San Francisco was a member, the second non-charter member.

I'm not going to review much of the history of the 50's. It is largely covered in our printed Annual Reports which have been available since 1950. I am sure no one will take it amiss if I point out how much the subsequent growth of the Society owes to the energy and organization ability of Richard W. Lambourne, our 1950 president, and also the 1952 president of the *National Federation of Financial Analysts Societies*. Unfortunately for us, Dick Lambourne is now in New York, but he is still a member of the San Francisco Society.

The constitution of our Society was completely rewritten in 1949, and it was apparently at that time that the name was changed. A vigorous expansion in membership was then underway, and the financial strength of the Society was promoted.

In 1952 *The National Federation of Financial Analysts Societies* convention was held in San Francisco with Los Angeles participating, the first convention away from the east, the first that took several days instead of one to encompass its program, and the first with organized field trips.

Since then our Society has continued to grow and strengthen. This could be documented by detailed references to such events as the 1956 Pacific Coast Forum, the wine trip held in 1958, following the Los Angeles convention, and this present Forum. The record since 1949 is available in our printed reports and I am not going to dwell on the events of these more recent years. I shall add two short sections to this discussion dealing with the history of our membership and the finances of our organization.

Membership

On August 31, 1959, our Society had 159 regular members, 91 associate members, and five provisional members. The regular members have the vote, and in general are professional Security Analysts, and portfolio managers with over five years' experience. The associates are junior *Analysts* admitted prior to October 31, 1958, college teachers, corporate financial executives and Analysts in an executive status. The provisionals are junior Analysts admitted since October 31, 1958.

Originally the membership was primarily made up of brokerage and dealer Analysts. During the thirties, bank Analysts and Analysts from funds and advisory firms joined the group.

We have nine women members (four regular members, four associate and one provisional).

As a result of the recent drive to find back records, rosters were obtained for 1929, 1930, 1935, 1936, 1937 (2), 1938, 1939, 1940 and 1943. Printed annual reports contain rosters since early 1950. On the basis of this incomplete record membership longevity breaks down as follows:

	Regular	Associate or Provisional
5 years or less	53	62
5 to 10 years	53	34
10 to 15 years	39	----
15 to 20 years	6	----
20 to 25 years	3	----
25 to 30 years	3	----
30 years	2	----

These figures are based on continuous membership. Our two 30-year members are Larry Duerig and Dal Wolff, who were members of record in January 1930 (and presumably might have joined in 1929) and whose names appear in every subsequent available roster.

Finances

Originally, in 1929, dues were $30 yearly, to include luncheons and dinners. Dues were cut to $18 yearly in 1931 and restored to $30, apparently in 1949. While regular members' dues have since been raised to $45, the establishment of associate dues at $15 has served to reduce the average to about $31, as regular membership has stabilized since 1955, while associate members have increased about 20% in number.

Until a couple of years ago overhead expenses were sufficiently low to permit allocation of a substantial share of regular member dues to luncheon expenses. This seems no longer feasible as the Society feels more and more heavily the burden of inflated costs. The rough figures on overhead costs are:

	Per Member	
	NFFAS	Other
1949	$3.35	$ 5.56
1954	4.21	8.08
1958-9	6.17	17.30

Key elements in the increases in overhead costs have been a sharp increase in the number of meetings during this decade and the considerable increases in postage.

(Editor's note: While an attempt was made to round up all speeches at the Pacific Coast Investment Forum, there were speakers who asked that we not include their remarks, and in other cases the tape recording presented some transcribing difficulties. Then there was one speaker whose remarks were of particular interest, but unfortunately his emphasis was on a single company; and this we try to avoid in pages of The Journal. Those who attended will, we believe, conclude that the articles published in this issue are representative of the Forum.)

More About Republic Steel's $375,000,000 Program



The significance of the $375,000,000 to be spent over the next 3 to 4 years can best be foreseen in these statements made by four of the corporation's top decision makers.

"The success of a company in the next decade will depend not only on its ability to produce, but, to an increasing degree, on its ability to sell. We have just completed a huge increase in capacity. The new $375,000,000 capital expenditure program marks our intensified emphasis on customer service."

CHARLES M. WHITE
Chairman

"In this program we will be concentrating on changes and additions which will further raise the efficiency of the corporation. When you raise efficiency, you improve product quality. This will benefit our customers. Raise efficiency and you reduce operating costs. This benefits our shareholders."

THOMAS F. PATTON
President

"Expenditure of this $375,000,000 over the next 3 or 4 years—and further sums after that—will increase Republic's competitiveness. We have our eye not only on foreign competition but on domestic competition, too. And on the competition from other materials. We want customers to come to Republic first. This means we will anticipate their fabricating needs. Customers are increasing the efficiency of their plants all the time with more modern equipment. To compete, we must anticipate the requirements of their new equipment, and be ready to provide the finishes, sizes, and other specifications they will bring to us in the future."

NORMAN W. FOY
Vice President in Charge of Sales



"We are planning to use this money to replace, improve, and add to our rolling and finishing facilities. We will process steels in a greater variety of ways. This does not mean we will change our product mix. It means we realize customers will be more demanding, and therefore, closer control will be required in order to meet their needs and requirements in the future. With a steel mill operation, you have to start to plan two years before you build. We are building now to meet specifications which are advanced today but which, we are convinced, will become usual among our customers in 5 or 6 years."

ERNEST R. JOHNSON
Vice President in Charge of Operations

REPUBLIC STEEL

CLEVELAND 1, OHIO



Letters

A Case of Scotch

Editor:

I have seen the write-up of my speech in Montreal. Thanks for the excellent coverage. But I am amused to find that the accent of the Sea Islands of Georgia and South Carolina is taken for "Scotch." The Scotch should feel complimented.

David McCord Wright
McGill University
Montreal, Canada

(Well, it was certainly a bonnie facsimile—Ed.)

* * *

Thank You, Mr. Phelps

Editor:

Congratulations on your plan to publish The Financial Analysts Journal every-other-month. That's a long step forward.

Thomas W. Phelps
Socony Mobil Oil Co.
New York, N. Y.

* * *

And Thanks Again

Editor:

I am a recent subscriber and I like your Journal very much. I am enclosing a $5 check for a year's subscription for a relative.

Rev. George Guzewicz
Binghamton, N. Y.

* * *

Sorry! Wrong Market

Editor:

I am most disappointed in your publication. I am therefore returning my first copy and would like to have my $5 returned. I do think your ad is quite misleading and this is definitely not the market-type information that is useful to a woman.

Mrs. H. P. Ross
Waltham, Mass.

(It's reassuring to know that we're not competing with The Ladies' Home Journal. However, Mrs. Ross scored a first: nobody has ever written us to say that our contents-cover ad was misleading.—Ed.)

* * *

Over the Coffee Cup

Editor:

The article "High Finance in Coffee" was so enlightening and enjoyable I wish to compliment you for having Mr. Bernard Colodney's views in your magazine.

Robert F. Snyder
Miami Fund
Hamilton, Ohio

San Francisco Does It Again

Editor:

Thank you for your interest in our Thirtieth Anniversary Pacific Coast Investment Forum, presented by The Security Analysts of San Francisco. Dr. Beryl Sprinkel opened the program with his well-documented presentation on the "Prospects for General Business." We were also pleased to welcome speakers from Boston, Chicago and New York as well as several participants from the corporate and institutional fields on the Pacific Coast.

Our Society was honored to have as guests, National Federation Executive Vice-President Jeremy Jenks, who contributed to the "Criteria for Common Stock Selection" panel, and President Hamilton Bolton, who delivered the very appropriate dinner address on "The Economy and the Stock Market—1929 and Now."

Eighteen of our 28 living past presidents were on hand to receive engraved silver cigarette box gifts at dinner ceremonies. Attendance, swelled by guest registration, ran well ahead of expectations and enabled the Society to show a profit — always surprisingly good news for an occasion of this type. Credit for the success of the Thirtieth Anniversary Forum should go to the fine teamwork of the Board of Governors of the Society and particularly to the efforts of Vice President Joe Edelstein; Secretary-Treasurer George Hopiak; and Jack Canvin and Gustav Knecht, Jr. They were ably assisted by members of the Program and House & Arrangements Committees.

Robert H. Perry, President
Security Analysts of
San Francisco

* * *

For Misleading: No Peer

Editor:

Please cancel our subscription immediately. We don't think that your recent remarks in your book review column were objective.

TASS
New York, N. Y.

(TASS, which camouflages itself as a "news agency", actually is the international propaganda arm of the Soviet Government. For up-to-the-minute distorted news stories, TASS has no peer. Furthermore, "objective" must be a new slant for TASS. How's that? Come again—Ed.)

* * *

Talking 'Cold Turkey'

Editor:

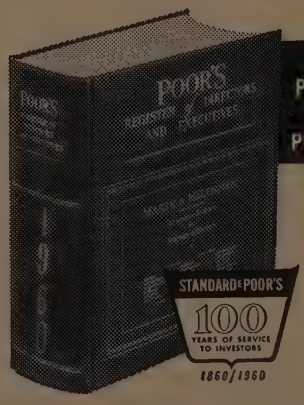
. . . I find much of value in your publication.

R. E. Sanderson
Minnesota Turkey
Industries, Inc.
Litchfield, Minn.

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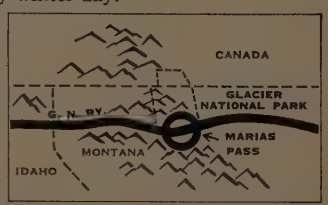
He conquered the Rockies for an Empire Builder

Seventy years ago a 36-year-old civil engineer battled a roaring blizzard in 40 below zero weather to explore an elusive pass in the Rocky Mountains of northern Montana. This epic of human courage proved the passage existed and opened the way for Great Northern's low-level route between the Great Lakes and the Pacific Ocean.

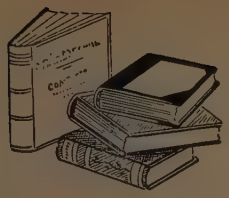
John F. Stevens was determined to fulfill successfully an assignment from a man he never had seen—James J. Hill, the budding empire builder, who was confident that a low pass suitable for his Great Northern tracks across the formidable Rockies existed along the Continental Divide less than 100 miles south of Canada. Maps showed a Marias Pass in this region, but there were no records that white men had explored it. Meriwether Lewis of the Lewis and Clark expedition vainly sought the pass and gave it its name in 1806.

Snow was already deep in the Rockies when Engineer Stevens took the job of locating the fabled pass. Factual information on the mountainous region was slim, and illness of his Indian guide forced Col. Stevens to alone make his successful reconnaissance of the Continental Divide on that bitterly cold and blizzardy winter day.

The doughty engineer's conquering of the Rockies gave Great Northern the lowest rail crossing of the Continental Divide in the United States north of New Mexico. Marias Pass is only 5,213 feet above sea level—an extremely low-altitude route through which Great Northern passenger and freight trains surmount the Montana Rockies with time-saving ease.



GREAT NORTHERN RAILWAY



BOOK REVIEWS

UNDERSTANDING PUT AND CALL OPTIONS. By Herbert Filer. New York: Crown Publishers, Inc. 125 pp. $3.00.

While it is not expected that everyone interested in the securities market must trade in options, the author cogently proves the point that a knowledge of puts and calls (option contracts) can at some time play an important part in one's investing activities. It may be an active professional investor or institution, or merely a small, less frequent trader who may have occasion to protect a profit; or possibly recapture stock after realizing a profit; or preserve substantial "paper profits" without selling out his position; or protect oneself against unlimited losses.

Some Common Definitions:

Call — A contract to *buy* 100 shares of common stock at a stated price for a specified period of time.

Put — A contract to *sell* 100 shares of common stock at a stated price for a specified period of time.

Straddle — A combination of a put and a call with identical price and time terms.

Spread—A straddle with a price differential.

Strip—A straddle with an additional put contract.

Strap—A straddle with an additional call contract.

The author is the head of a put and call brokerage firm and a member of the Put and Call Brokers and Dealers Association. A New York Stock Exchange member firm is also a party to each contract, as such a signature is required on the reverse side of each option guaranteeing to the holder that the stock will be accepted (put) or delivered (call).

The main portion of the book is devoted to a description of numerous situations where options fill a need or serve a useful purpose. In each case the author is careful to explain the consequences to each party if the option is exercised, or not exercised, and if the stock price moves up or down.

The cardinal rules to follow in option *writing* are: never sell a call unless you own the stock; and never sell a put without the ability to buy the stock.

An appendix is included, "Income Tax Treatment of 'Put' and 'Call' option Transactions", prepared by Brach, Gosswein and Lane, C.P.A.s. Various transactions are described and the tax treatment follows, complete with citations

* * *

PROFITABLE TRADING WITH PUTS AND CALLS. By Richard Whiting. Old Bethpage, N. Y.: Convertible Investments. 52 pp.

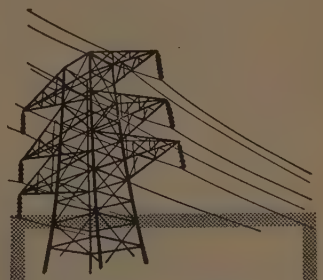
The author of this pamphlet covers substantially the same ground as has Herbert Filer in his book *Understanding Put and Call Options,* which is also reviewed in this issue. Mr. Whiting, however, uses fewer examples, with a greater detailed discussion of each; illustrates basic reasons for selling (writing) options; devotes considerable space to the use of options with convertible bonds; and offers an interesting explanation of "conversion".

A portfolio manager may well consider writing options on a conservative basis for enhancing income; for example, selling put options on stocks he would be willing to take into position at lower prices and then selling call options on any stocks which were subsequently put to him. When one can obtain profits of 20% on an annual basis with a reasonable safety margin, an investment portfolio may show remarkable results. Such a return would mean a doubling of assets in about four years, a tripling in six years: a $10,000 portfolio which returned 20% annually would be worth about $400,000 in 20 years! At any rate, the author's arithmetic follows soundly, assuming such a return is obtainable with consistency.

A most interesting aspect of a put and call broker's business is the conversion of a put to a call (or vice versa), when there exists a supply for either puts or calls—but the demand only exists for the other.

The versatility and adaptability of

THE West Penn Electric Company
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COMMON STOCK
40¢ PER SHARE
Payable December 29, 1959
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WEST PENN ELECTRIC SYSTEM
Monongahela Power Company
The Potomac Edison Company
West Penn Power Company



Southern California Edison Company

DIVIDENDS

The Board of Directors has authorized the payment of the following quarterly dividends:

COMMON STOCK
Dividend No. 200
65 cents per share;

PREFERENCE STOCK,
4.48% CONVERTIBLE SERIES
Dividend No. 51
28 cents per share;

PREFERENCE STOCK,
4.56% CONVERTIBLE SERIES
Dividend No. 47
28½ cents per share.

The above dividends are payable January 31, 1960 to stockholders of record January 5. *Checks will be mailed from the Company's office in Los Angeles, January 30.*

P. C. HALE, *Treasurer*

December 17, 1959

Still nothing else like it in the world of travel



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For an experience you'll cherish a lifetime, go Super Chief on your next trip between Chicago and Los Angeles. Plush surroundings. Famous people. Service in the grand manner. Obtain reservations at any Santa Fe Traffic Office or Travel Agent.

puts and calls is perhaps their most outstanding characteristic, and the alert reader may well conjure up some obscure variations which are not covered by this work or, in fact, not yet tried. This fascinating business, prevalent in Europe for centuries, seems destined to become more active and popular in the United States in years to come.

Both of above Put and Call book reviews were written by Harold H. Hammer, investment counselor.

* * *

THE IMAGE MERCHANTS, By Irwin Ross. Garden City, N. Y.: Doubleday & Co., Inc. 288 pp. $4.50.

Readers who want the low-down on public relations and the people who work its magic will find *The Image Merchants,* by Irwin Ross, a source of both information and entertainment. Those who are looking for an expose of PR presented in a detrimental vein will be disappointed.

Mr. Ross makes it clear that "the fabulous world of public relations" is composed of as many diverse personalities, as it is of the varied activities they conduct on behalf of their clients.

Quite different are the techniques of Earl Newsom, Carl Byoir, Hill & Knowlton, Bernie Kamber, Ben Sonnenberg, Jim Moran, Ivy Lee and many others, ranging from press agent to public relations counsellor —with shades of variation outdoing the rainbow. Many, but not all, firms are mentioned. Conspicuous by its absence is America's second oldest, H. A. Bruno & Associates, public relations counselors for 36 years.

Mr. Ross sympathetically explains how each is effective in its own way. Each has a particular need to fill. Who can say that the cancer specialist is more important than the gynecologist, the dermatologist or the general practitioner?

"The goal of many public relations men is some day to attain the lonely eminence of Earl Newsom," says the author. In an atmosphere of dignity and silence, Mr. Newsom's organization counsels clients such as Standard Oil Co. (N. J.), Reynolds Metals, Colonial Williamsburg and Ford Motor Co.

The equally successful Mr. Sonnenberg (a picture of Edwardian splendor) conducts much of his operations from his huge, elegant home on Gramercy Park, surrounding himself with luxurious comfort designed to dazzle clients and press.

Hill & Knowlton, says Mr. Ross, is a "big-time PR factory"—one of the two largest firms in the field. The other big one is Carl Byoir & Associates, proponent of the "third party technique", and defender of the A&P and the railroads.

And then there is Edward L. Bernays, "the idealogue of public relations . . . one of the few missionaries still doing business under the old tent."

"The basic public relations type is the salesman," author Ross asserts, "though he appears in many guises and though he sells an impalpable commodity—the magic which can be performed by the written word and the visual image. To be successful a PR man man must be able to sell both client and journalists."

Mr. Ross presents both the good and bad aspects of PR — but the good far outweighs the bad. It would be difficult indeed for any executive — financier, manufacturer, government head or what-have-you — to read *Image Merchants* without concluding that he and his organization cannot manage to meet competition, let alone survive, without the help of the men who are expert in creating the image he would like to present to his particular public. The fact that the most successful firms today employ some form of public relations is the most convincing argument that PR can employ in its own behalf.

—Reviewed by Emilio Desvernine
Public Relations Counselor

* * *

THE TECHNIQUE OF PROPER GIVING. By Walter J. Held. New York, Toronto, London: McGraw-Hill Book Co. 220 pp. $6.

The problem (or technique, as the author puts it) of proper corporate giving today has grown to such proportions that, in some cases, it's almost another subject to add to a balance sheet.

And the reviewer of this book is fully aware of the problem for he was associated with Author Held during part of the years when Mr. Held directed proper-giving technique for the Standard Oil Co. of California. And California Standard is only one of scores of companies which employ a full-time employee to review and suggest what a com-

pany should contribute to maintain its "proper image" in the communities where it does business.

Here is another field where a trained Financial Analyst might be just the person to hold such a position. For, it's certainly a probing job—in many cases—to determine whether a monetary contribution should or should not be given, and the "correct" amount.

And while Author Held presents some "formulas", he's well aware (as his first few paragraphs indicate) that there's always the human factor. That is, despite all the basic and sound reasons for why or why not, a contribution should be made, a top executive often puts on the pressure, or, conversely, has the pressure put on him, to "kick through" with "X" number of dollars. It's sort of a *quid pro quo* operation—in too many cases. But regardless of that, the corporate laborer (i.e., the person in charge of "proper giving") is worthy of his hire.

And indicative of how sensitive stockholders are about the amount of money given to various organizations, is the fact that the world's largest oil company, a few years ago, found itself the defendant in a law suit instigated by a group of its stockholders, who were "viewing with alarm" the amount of money given to a certain university.

Summing up: For any Analyst who is asked how to handle proper corporate giving, Author Held's "Technique of Proper Giving" is the book. *W. B.*

* * *

SHORT TERM. By Jay Richard Kennedy. Cleveland, Ohio and New York: The World Publishing Company. 541 pp. $5.75.

With Wall Street as a background, this is a novel in which a wealthy statistician (could be a Financial Analyst) wobbles between the continued pursuit of money, or retiring to a more academic life at Cape Cod. It is good reading as a novel for it's all quite plausible—and might even be a biographical account of a man of intellect and wealth.

Of interest to Financial Analysts is the fact that Author Kennedy is not only a successful novelist, but he is also president of J. R. Kennedy & Co., Inc., an investment firm with membership on the New York Stock Exchange.

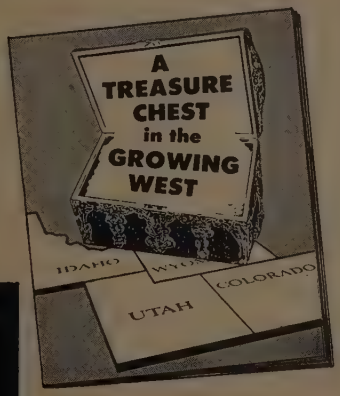
In reading *Short Term,* this reviewer was reminded of Aldous Huxley's famed *Point-Counter-Point,* in which the inter-play of characters' lives proves most provocative and fascinating. In *Short Term,* readers will enjoy the scenes which take place on the floor of the New York Stock Exchange, as well as the almost masochistic antics of a man called Mac. Mac is a highly unethical, immoral and tempestuous bad-boy member of the Exchange whose analytical ability to read the tape—except for a single million dollar loss—is truly diabolical. The other characters are somewhat more endearing. *W. B.*

In Memoriam

John C. Hagan, Jr., 60, was a partner of Mason-Hagan, Inc., and a member of The Richmond Society of Financial Analysts. An active civic leader, Mr. Hagan was a graduate of the Virginia Military Institute. He was married to the former Eliza Tabb Mason. They have two children, John C. III, who was in business with his father, and Mrs. Walter Tabb of Charlottesville.

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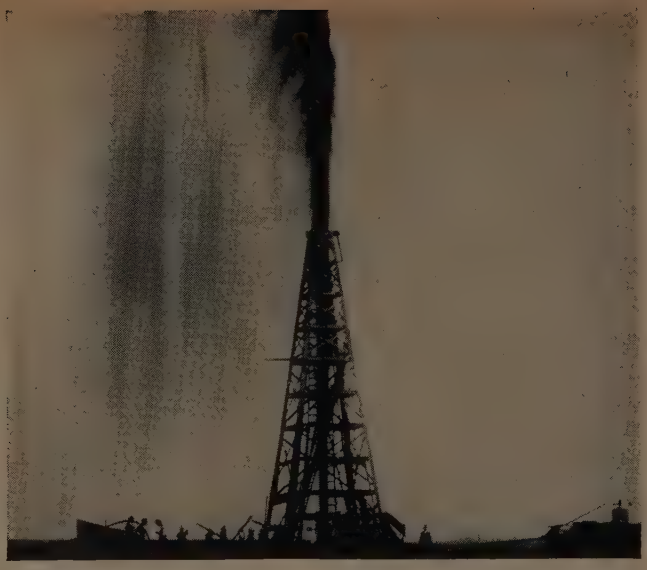
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Publication Dates

The Journal is published six times a year—January, March, May, July, September and November.

Subscription Rates

$5.00 per year in the United States.
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Index to the Analysts Journal for 1959

Compiled by Francis J. Calkins, Professor of Finance, Marquette University

SUBJECT INDEX

Africa

ter Kuile, Curtis V. Africa: An 'Open End' Investment. XV, Feb. '59, 73-75.

Boericke, William F. South African Gold. XV, Nov. '59, 55-58.

Air Lines

Templeton, John M. Airlines, A Growth Industry. XV, Feb. '59, 41-44.

Aircraft Industry

Weidenbaum, Murray L. Product Diversification in Aircraft Manufacturing Industry. XV, May '59, 51-56.

Analysts Journal

Calkins, Francis J. Index to Volume XIV. XV, May '59, 117-122.

Banks and Banking

Manfrini, Joseph. Branch Bank Stocks Cited as 'Better'. XV, Feb. '59, 77-79.

Volk, Harry J. Bankers Meet Challenge of Booming Population. XV, Aug. '59, 73-74.

Bolton, A. Hamilton

Minnes, Gordon. Hamilton Bolton—Financial Forecaster. XV, July '59, 49-50.

Bonds—Government Agency

Borman, Clyde E. What About Agency Issues? XV, Feb. '59, 61-65.

Business Cycles

Storer, Robert W. A Law of Market Indeterminacy. XV, Nov. '59, 13-15.

Business Outlook

Randell, Donald H. A Reappraisal of the World's Economy. XV, Aug. '59, 55-57.

Smith, Mendon W. Economic Outlook for the 1960's. XV, Nov. '59, 9-11.

Chemical Industry

Kennedy, Robert E. Jr. Growth Stocks and the Chemical Products Industry. XV, Feb. '59, 51-58.

Windisch, Richard P. The European Chemical Industry. XV, Aug. '59, 25-33.

Cocoa

Close, Frank A. High Finance in Cocoa. XV, May '59, 75-78.

Coffee

Colodney, Bernard. High Finance in Coffee. XV, Nov. '59, 69-78.

Common Market, European—see **European Economic Community.**

Corporation Finance

Leibowitt, S. David. A Corporate Lawyer Looks at Industry and Finance. XV, Nov. '59, 45-46.

Dividends

Boni, Alfred C. Influence of 'Extras' and 'Specials' in Determining Stock Yields. XV, Aug. '59, 51-53.

Drug Industry

Fox, Mortimer J. Jr. New Pharmaceutical Frontiers. XV, May '59, 27-31.

Education—Investment

Canvin, Jack H. Introduction to Investments: TV - Educational. XV, Aug. '59, 81-82.

Electronics

Whitehead, Louis H. The Electronics Industry in Europe. XV, July '59, 41-46.

Cataldo, J. T. Semiconductors. XV, Aug. '59, 71-72.

European Economic Community

Beltchev, Koitcho. The European Common Market. XV, Feb. '59, 7-10.

Miles, Richard. British Views of the Common Market and the Free Trade Area. XV, Feb. '59, 13-15.

Larcier, Raymond L. European Common Stocks. XV, May '59, 89-92.

Maydin, Doris. Impressions of Western Europe. XV, July '59, 23-29.

European Field Trip (1959)

Rotnem, Ralph A. The European Field Trip. XV, July '59, 9-11.

Federal Reserve System

Slesinger, Reuben E. The Federal Reserve System and Current Monetary Policy. XV, Feb. '59, 37-39.

Foods Industry

Willis, Paul S. Grocery Industry Looks to a Bright Future. XV, Nov. '59, 87-89.

Forecasting, Economic

Moore, Geoffrey H. Measuring the 1957-58 Recession. XV, Feb. '59, 17-20.

White, Walter E. Secular and Cyclical Trends in the Economy of the United States. XV, Aug. '59, 77-80.

Bower, Casper M. A New Economic Barometer Needed. XV, Nov. '59, 33-37.

Foreign Securities

Larcier, Raymond L. European Common Stocks. XV, May '59, 89-92.

Haidt, Frances. Analysts Explore European Investments. XV, July '59, 13-19.

Lilley, T. R. European Equities for the American Pension Fund. XV, July '59, 37-39.

Gold

Griffith, B. Barret. The Gold Flow. XV, Nov. '59, 51-53.

Boericke, William F. South African Gold. XV, Nov. '59, 55-58.

Growth Stocks

Kennedy, Robert E. Jr. Growth Stocks and the Chemical Products Industry. XV, Feb. '59, 51-58.

Greeley, Robert E. Forecasting: 'Growth Stocks for Income'. XV, Feb. '59, 109-111.

Conklin, G. Howard. Is Steel a Growth Industry? XV, May '59, 15-17.

Inflation

Woodworth, A. Vernon Jr. Natural Resource Stocks as an Inflation Hedge. XV, Aug. '59, 45-47.

International Trade — see also **European Economic Community.**

Investment Management

Vawter, Jay. The Role of Formula Timing Plans in Investment Analysis. XV, Feb. '59, 67-68.

Greeley, Robert E. Forecasting: 'Growth Stocks for Income'. XV, Feb. '59, 109-11.

Markstein, David L. Investing in Tomorrow's Bright New World. XV, May '59, 83-86.

Storer, Robert W. A Law of Market Indeterminacy. XV, Nov. '59, 13-15.

Proschan, Arnold. Increasing Capital Gains From Common Stock Investments. XV, Nov. '59, 29-30.

Management, Corporate

Weaver, Robert A. A Corporate Officer Analyzes His Financial Friends. XV, Feb. '59, 46-47.

Market Analysis

Storer, Robert W. Setting Stock Signal Criteria for Maximum Gains. XV, Feb. '59, 35-36.

ALLEGHENY LUDLUM STEEL CORPORATION

PITTSBURGH, PENNA.

At a meeting of the Board of Directors of Allegheny Ludlum Steel Corporation held today, December 16, 1959, a dividend of fifty cents (50c) per share was declared on the Common Stock of the Corporation, payable December 29, 1959 to shareholders of record at the close of business on December 18, 1959.

S. A. McCASKEY, JR.
Secretary

Storer, Robert W. A Law of Market Indeterminacy. XV, Nov. '59, 13-15.

Mexico

Ross, Carl D. Is It Safe to Invest in Mexico? XV, Aug. '59, 67-69.

Monetary Policy

Slesinger, Reuben E. The Federal Reserve System and Current Monetary Policy. XV, Feb. '59, 37-39.

Schumacher, Arnold C. Monetary Forces and the Stock Market. XV. May '59, 95-99.

Money

The Story of Money. XV, Aug. '59, 49.

Money Market

Kneass, George B. The Money Market. XV, Aug. '59, 9-12.

National Federation of Financial Analysts' Societies

Bolton, A. Hamilton. Reminiscences of the 1959 Convention. XV, July '59, 53-55.

Bretey, Pierre R. and Burns, Warren. The 1959 Annual Analysts Convention. XV, July '59, 57-61.

Kulp, A. Moyer. National Federation to Set Professional Standards. XV, July '59, 65.

Convention Business Sessions, 1959. XV, July '59, 67-78, 95-106.

Convention Field Trips, 1959. XV, July '59, 83-88.

Options

Cresson, George V. The Writing of Options. XV, May '59, 43-46.

Pension Trusts

Lilley, T. R. European Equities for the American Pension Fund. XV, July '59, 37-39.

Petroleum Gas, Liquefied

Anton, Mark. The Liquefied Petroleum Gas Industry Today. XV, May '59, 59-62.

Petroleum Industry

Frankel, Paul H. and Newton, Walter L. Profitability of International Oil Companies. XV, Nov. '59, 81-85.

Price-Earnings Ratios

Zinbarg, Edward D. Price-Earnings Ratios and Yields. XV, Aug. 59, 35-42.

Railroad Industry

Sullivan, James R. What Price Featherbedding? XV, Feb. '59, 29-32.

Roddewig, Clair M. A Breakthrough to Higher Rail Earnings Is in the Making. XV, Feb. '59, 69-71.

Loomis, Daniel P. Railroads Aim to Win Battle. XV, May '59, 33-35.

Armstrong, R. Wright. The Railroads: A Year of Decision. XV, Nov. '59, 39-42.

Scholarship—Helen Slade Sanders Memorial

Columbia Awards First Federation Scholarship. XV, Aug. '59, 65.

Security Analysis

Molodovsky, Nicholas. Valuation of Common Stocks. XV, Feb. '59, 23-27, 84-99.

Security Analysis—Methods

Talley, Walter J. Jr. Two New Tools for Evaluating Companies Within an Industry. XV, Feb. '59, 101-106.

Molodovsky, Nicholas. Appraisal of General Motors Common Stock. XV, May '59, 67-72, 107-112.

Corporate Information of Interest to Analysts. XV, July '59, 18.

Mayer, Robert W. Analysis of Internal Risk in the Individual Firm. XV, Nov. '59, 91-95.

Security Analysts

Belgians Organize Society of Financial Analysts. XV, Nov. '59, 46.

Ex-Wall Street Analyst: A Dutch Mayor. XV, Nov. '59, 49.

San Francisco Analysts Study Federal Reserve. XV, Nov. '59, 37.

Indianapolis Analysts Society Becomes 23rd NFFAS Member. XV, Nov. '59, 37.

Security Analysts—Profession

Kulp, A. Moyer. National Federation to Set Professional Standards. XV, July '59, 65.

Seminar for Financial Analysts

Bolton, A. Hamilton. Financial Analysts Seminars. XV, Feb. '59, 49.

Short Selling

Wyckoff, Peter G. The Method and Motives for Selling Short. XV, May '59, 101-104.

Splits, Stock

Bellemore, Douglas H. and Blucher, Lillian H. A Study of Stock Splits in the Post War Years. XV, Nov. '59, 19-26.

Stock Certificates

World's First Stock Certificate. XV, Aug. '59, 17.

Stock Exchanges—European

Gordon, Monte J. European Stock Exchanges. XV, July '59, 31-34.

Steel Industry

Conklin, G. Howard. Is Steel a Growth Industry? XV, May '59, 15-17.

Anonymous. A Comparison of British and American Steel Companies. XV, May '59, 19-24.

Mennis, Edmund A. A Reappraisal of the Steel Industry. XV, Aug. '59, 15-23.

Sugar

Colodney, Bernard. High Finance in Sugar. XV, Aug. '59, 59-64.

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Textile Industry
Knodel, H. William. Textile Industry in Transition. XV, Nov. '59, 61-67.

Transportation Equipment
Sillcox, L. K. Transportation Equipment Equity. XV, May '59, 37-41.

Utilities
Ferguson, Donald A. Public Utilities: A Real Growth Industry of the 1950's. XV, Feb. '59, 81-83.

Valuation—Securities
Molodovsky, Nicholas. Valuation of Common Stocks. XV, Feb. '59, 23-27, 84-99.

LIST OF AUTHORS

A

Anonymous
A Comparison of British and American Steel Companies. XV, May '59, 19-24.
Anton, Mark
The Liquefied Petroleum Gas Industry Today. XV, May '59, 59-62.
Armstrong, R. Wright
The Railroads: A Year of Decision. XV, Nov. '59, 39-42.

B

Bellemore, Douglas H.
(with Blucher, L. H.)
A Study of Stock Splits in the Post War Years. XV, Nov. '59, 19-26.
Beltchev, Koitcho
The European Common Market. XV, Feb. '59, 7-10.
Blucher, Lillian H.
(with Bellemore, D. H.)
A Study of Stock Splits in the Post War Years. XV, Nov. '59, 19-26.
Boericke, William F.
South African Gold. XV, Nov. '59, 55-58.
Bolton, A. Hamilton
Financial Analysts Seminars. XV, Feb. '59, 49.
Reminiscences of the 1959 Convention. XV, July '59, 53-55.
Boni, Alfred C.
Influence of 'Extras' and 'Specials' in Determining Stock Yields. XV, Aug. '59, 51-53.
Borman, Clyde E.
What About Agency Issues? XV, Feb. '59, 61-65.
Bower, Casper M.
A New Economic Barometer Needed. XV, Nov. '59, 33-37.
Bretey, Pierre R. (with Burns, W.)
The 1959 Annual Analysts Convention. XV, July '59, 57-61.
Burns, Warren (with Bretey, P. R.)
The 1959 Annual Analysts Convention. XV, July '59, 57-61.

C

Canvin, Jack H.
Introduction to Investments: TV-Educational. XV, Aug. '59, 81-82.
Cataldo, J. T.
Semiconductors. XV, Aug. '59, 71-72.
Close, Frank A.
High Finance in Cocoa. XV, May '59, 75-78.
Colodney, Bernard
High Finance in Sugar. XV, Aug. '59, 59-64.
High Finance in Coffee. XV, Nov. '59, 69-78.
Conklin, G. Howard
Is Steel a Growth Industry? XV, May '59, 15-17.
Cresson, George V.
The Writing of Options. XV, May '59, 43-46.

F

Ferguson, Donald A.
Public Utilities. XV, Feb. '59, 81-83.
Fox, Mortimer J., Jr.
New Pharmaceutical Frontiers. XV, May '59, 27-31.
Frankel, Paul H. (with Newton, W. L.)
Profitability of International Oil Companies. XV, Nov. '59, 81-85.

G

Gordon, Monte J.
European Stock Exchanges. XV, July '59, 31-34.

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Greeley, Robert E.
Forecasting: 'Growth Stocks for Income'. XV, Feb. '59, 109-111.
Griffith, B. Barret
The Gold Flow. XV, Nov. '59, 51-53.

H

Haidt, Frances
Analysts Explore European Investments. XV, July '59, 13-19.

K

Kennedy, Robert E., Jr.
Growth Stocks and the Chemical Products Industry. XV, Feb. '59, 51-58.
Kneass, George B.
The Money Market. XV, Aug. '59, 9-12.
Knodel, H. William
Textile Industry in Transition. XV, Nov. '59, 61-67.
Kulp, A. Moyer
National Federation to Set Professional Standards. XV, July '59, 65.

L

Larcier, Raymond L.
European Common Stocks. XV, May '59, 89-92.
Leibowitt, S. David
A Corporate Lawyer Looks at Industry and Finance. XV, Nov. '59, 45-46.
Lilley, T. R.
European Equities for the American Pension Fund. XV, July '59, 37-39.
Loomis, Daniel P.
Railroads Aim to Win Battle. XV, May '59, 33-35.

M

Manfrini, Joseph
Branch Bank Stocks Cited as 'Better'. XV, Feb. '59, 77-79.
Markstein, David L.
Investing in Tomorrow's Bright New World. XV, May' 59, 83-86.
Mayer, Robert W.
Analysis of Internal Risk in the Individual Firm. XV, Nov. '59, 91-95.
Mennis, Edmund A.
A Reappraisal of the Steel Industry. XV, Aug. '59, 15-23.
Miles, Richard
British Views of the Common Market and the Free Trade Area. XV, Feb. '59, 13-15.
Minnes, Gordon
Hamilton Bolton — Financial Forecaster. XV, July '59, 49-50.
Maydin, Doris
Impressions of Western Europe. XV, July '59, 23-29.
Molodovsky, Nicholas
Valuation of Common Stocks. XV, Feb. '59, 23-27, 84-99.
Appraisal of General Motors Common Stock. XV, May '59, 67-72, 107-112.
Moore, Geoffrey H.
Measuring the 1957-58 Recession. XV, Feb. '59, 17-20.

N

Newton, Walter L.
(with Frankel, Paul H.)
Profitability of International Oil Companies. XV, Nov. '59, 81-85.

P

Petersen, T. S.
Management's International Mission. XV, May '59, 9-13.
Proschan, Arnold
Increasing Capital Gains from Common Stock Investments. XV, Nov. '59, 29-30.

R

Randell, Donald H.
A Reappraisal of the World's Economy. XV, Aug. '59, 55-57.
Roddewig, Clair M.
A Breakthrough to Higher Rail Earnings Is in the Making. XV, Feb. '59, 69-71.
Ross, Carl D.
Is It Safe to Invest in Mexico? XV, Aug. '59, 67-69.
Rotnem, Ralph A.
The European Field Trip. XV, July '59, 9-11.

S

Schumacher, Arnold C.
Monetary Forces and the Stock Market. XV, May '59, 95-99.
Sillcox, Lewis K.
Transportation Equipment Equity. XV, May '59, 37-41.
Slesinger, Reuben E.
The Federal Reserve System and Current Monetary Policy. XV, Feb. '59, 37-39.
Smith, Mendon W.
Economic Outlook for the 1960's. XV, Nov. '59, 9-11.
Storer, Robert W.
Setting Stock Signal Criteria for Maximum Gains. XV, Feb. '59, 35-36.
A Law of Market Indeterminacy. XV, Nov. '59, 13-15.
Sullivan, James R.
What Price Featherbedding? XV, Feb. '59, 29-32.

T

Talley, Walter J. Jr.
Two New Tools for Evaluating Companies Within an Industry. XV, Feb. '59, 101-106.
Templeton, John M.
Airlines, A Growth Industry. XV, Feb. '59, 41-44.
ter Kuile, Curtis V.
Africa: An 'Open End' Investment. XV, Feb. '59, 73-75.

V

Vawter, Jay
The Role of Formula Timing Plans in Investment Analysis. XV, Feb. '59, 67-68.
Volk, Harry J.
Bankers Meet Challenge of Booming Population. XV, Aug. '59, 73-74.

W

Weaver, Robert A.
A Corporate Officer Analyzes His Financial Analyst Friends. XV, Feb. '59, 46-47.
Weidenbaum, Murray L.
Product Diversification in Aircraft Manufacturing Industry. XV, May '59, 51-56.
White, Walter E.
Secular and Cyclical Trends in the Economy of the United States. XV, Aug. '59, 77-80.
Whitehead, Louis H.
The Electronics Industry in Europe. XV, July '59, 41-45.
Willis, Paul S.
Grocery Industry Looks to a Bright Future. XV, Nov. '59, 87-89.
Windisch, Richard P.
The European Chemical Industry. XV, Aug. '59, 25-33.
Woodworth, A. Vernon, Jr.
Natural Resource Stocks as an Inflation Hedge. XV, Aug. '59, 45-47.
Wyckoff, Peter G.
The Method and Motives for Selling Short. XV, May '59, 101-104.

Z

Zinbarg, Edward D.
Price-Earnings Ratios and Yields. XV, Aug. '59, 35-42.

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COMMON STOCK
DIVIDEND NO. 176

The Board of Directors on December 16, 1959, declared a cash dividend for the fourth quarter of the year of 65 cents per share upon the Company's common capital stock. This dividend will be paid by check on January 15, 1960, to common stockholders of record at the close of business on December 24, 1959.

K. C. CHRISTENSEN,
Vice President and Treasurer
San Francisco, Calif.

P·G·and E·



Mrs. Peff, President, Superior Air Products Co., Newark, N. J., shown in her office with Supairco's recently developed liquid-oxygen "vacuum bottle."

meet Mrs. Peter Peff

talented executive and a good customer of Anaconda

Many a tough problem has been solved by Mrs. Peff and her company since 1952, when she assumed the presidency after her husband's death.

Specialists for thirty years in building low-temperature apparatus and complete plants to produce oxygen and other gases, "Supairco" was called on recently to develop a small, compact, lightweight container to supply oxygen for aircraft crews at high altitudes. Supairco did just that —with its ingenious design for a "vacuum bottle" which holds *liquid oxygen at 297 degrees below zero, Fahrenheit!* One of the key questions—what metals would do the job best?

After careful research and testing, Supairco chose Anaconda's special copper-silicon alloy, Everdur®, for the inner sphere which contains the liquid oxygen. Everdur was selected because of its ready workability, corrosion resistance and high strength—a combination of properties which withstands the vibration and fatigue stresses aloft, *plus* the shocks associated with catapult launchings and carrier-based landings.

For the outer sphere, a shell of highly polished, heat-reflecting Anaconda Copper was used to maintain the vacuum which keeps the liquid-state oxygen at the extremely low temperature necessary.

The "vacuum bottle" shown above, when fully valved and charged, weighs only ⅓ as much as the heavy, cumbersome cylinder it replaces, and requires only a fraction of the space. Yet Supairco's new product provides a high-flying, eight-man crew with all the oxygen it needs.

Anaconda, through its subsidiary The American Brass Company, produces more than 100 standard alloys of copper, each providing its own combination of properties. Special alloys are regularly developed to meet specific applications. This is in keeping with the continuing aim of Anaconda research in the whole nonferrous-metal field: Better ways to do things, in home and industry. 59173 A

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Index to Advertisers

Allegheny Ludlum Steel 81
American-Marietta 13
American Telephone & Telegraph.. 6
Anaconda Company 85
Armco Steel Corporation 88

Baltimore Gas & Electric 29
Beneficial Finance 5

Celanese Corporation 1
Columbia Gas System 47
Consolidated Natural Gas 25

Federal Paper Board 82
Financial Analysts Seminar 42
Freeport Sulphur 14

Garrett Corporation ..... 4th cover
General Telephone Corp. .... 2d cover
Goodyear Tire & Rubber 10
W. R. Grace & Co. 80
Great Northern Railway 74

Harshaw Chemical Company 55
Holland Furnace Co. 83

Interlake Iron Corporation 25

P. Lorillard Company 25

Marquette Cement 20
Montrose Chemical Co. 77

New England Electric System 26

Pacific Gas & Electric 84
Panhandle Eastern Pipe Line 19
Public Service Elec. & Gas .. 3d cover
Pullman, Inc. 29

Radio Corp. of America 29, 82
Republic Steel Corp. 72

Santa Fe 76
Seaboard Finance Corp. 86
Sinclair Oil Corporation 87
Southern California Edison Co. ... 75
Standard & Poor's 73
Sunray Mid-Continent Oil Co. 2

Texaco, Inc. 78
Texas Instruments 48
Tri-Continental Corp. 82
The United Corporation 46

United Gas 30
Utah Power & Light 77

Western Union 56
West Penn Electric 75

Yale & Towne Mfg. Company 12

THE JOURNAL INDEX

The 1959 Index to The Analysts Journal, compiled by Professor Francis J. Calkins of Marquette University, starts on page 81. Notice of this does not appear on the cover, as the cover went to press before copy for the Index became available.—*Editor*

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THE FINANCIAL ANALYSTS JOURNAL

82 Beaver Street, New York 5, N. Y.

Stockholders Get Report 48 Hours After Audit

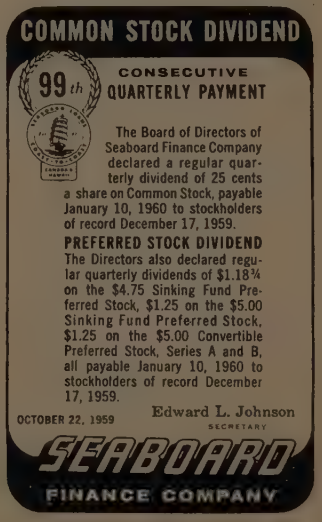
Within 48 hours after the books of Genesco, Inc. were audited, the 11,000 stockholders had its annual report. This is believed, along Wall Street, to be a bit of corporate and financial history, in that weeks, and sometimes months, normally elapse between the time a corporation's books are closed and stockholders see the balance sheets.

Created and executed by The Manning Public Relations firm, the report was designed to give the fullest possible information in the shortest possible time; after the year's figures were known.

Commenting upon the rapid distribution of this annual report, the Wall Street investment firm of Bruns, Norderman & Co., in part, said in a market letter:

"Today's investor conducts an increasing search for high-quality management and he would prefer an organization which can project a good 'corporate image', increase its profits, and keep stockholders informed quickly and efficiently. Genesco appears to have done this job admirably, and a tip of the hat is included to The Manning Public Relations firm which aided in the promotion of new concepts in corporate annual reports."

Investing is not an exact science. It is a science of probabilities rather than certainties. This is why even the best management makes frequent mistakes. However, over a period of time good management will make many more right decisions than wrong ones. Good management is the keystone of successful investing.





New station sign, featuring the name in red and the dinosaur in green, is being installed at Sinclair outlets in 36 states.

The Return of the Dinosaur!

The dinosaur, long identified with fine crude oil, is returning to Sinclair dealer stations.

This new sign is a symbol of the finest in petroleum products.

It is the symbol adopted by Sinclair Refining Company, the Company that supplies nearly one-half of the aircraft oil used by major scheduled airlines in the U. S.; that fuels and lubricates more than 150 American railroads; that was called upon to supply special lubricants for America's satellite launching rockets; that has behind it 44 years of manufacturing and research achievement.

The new sign is also a symbol of Sinclair's acceptance in the market place, where its 25,000 independent dealers enjoy the loyal support of millions of discerning motorists.

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ARMCO WEARS MANY HATS

New steels are born at Armco

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For example:

Armco Division produces millions of tons of steel sheets and strip a year. But the products that most distinguish Armco Division are its special steels. Some are designed for deep-drawing or porcelain enameling. Others are unique stainless steels and electrical steels or grades with special protective coatings. Each has unusual properties, but all have one thing in common. They perform better in fabrication or service than ordinary steels.

Sheffield Division supplies a wide range of steel products used by manufacturers, fabricators of structural and reinforcing bars, farmers and the oil industry. It also serves America with products such as bolts, nuts, forgings, grinding media, wire, alloys and other special-purpose steels.

The National Supply Company is the world's largest manufacturer and distributor of oil field machinery and equipment. This Armco subsidiary serves the oil industry through a network of company-owned supply stores in every major oil field in the United States, Canada and Venezuela.



The Armco International Corporation is responsible for Armco interests abroad, operates 16 fabricating plants and conducts business through numerous offices and warehouses in 26 countries.

Union Wire Rope Corporation makes high carbon wire, wire rope, braided wire fabric and stress-relieved wire and strand for pre-stressed concrete. The company's growing plant at Kansas City, Missouri, is equipped to make approximately 90,000 types of wire rope.

Armco Drainage & Metal Products, Inc., the world's foremost manufacturer of drainage and related construction products, has pioneered every major advance in the corrugated metal pipe industry. Armco Drainage is also among the leaders in the production of factory-engineered steel buildings, welded steel pipe, highway guard rail and other fabricated metal products.

* * *

And there you have the story of how the steels and skills of 43,000 Armco men and women serve America and the free world. Armco Steel Corporation, General Offices, Middletown, Ohio.

ARMCO STEEL

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Above are sketches of a few of the new industrial plants erected in New Jersey during 1959.

Industrial growth during the year 1959 was healthy in the New Jersey area served by Public Service Electric and Gas Company. More new industries came to New Jersey, at the Crossroads of the East, than during the previous year. The final quarter was particularly successful, and there is every indication that industrial progress here will continue during the coming months and years.

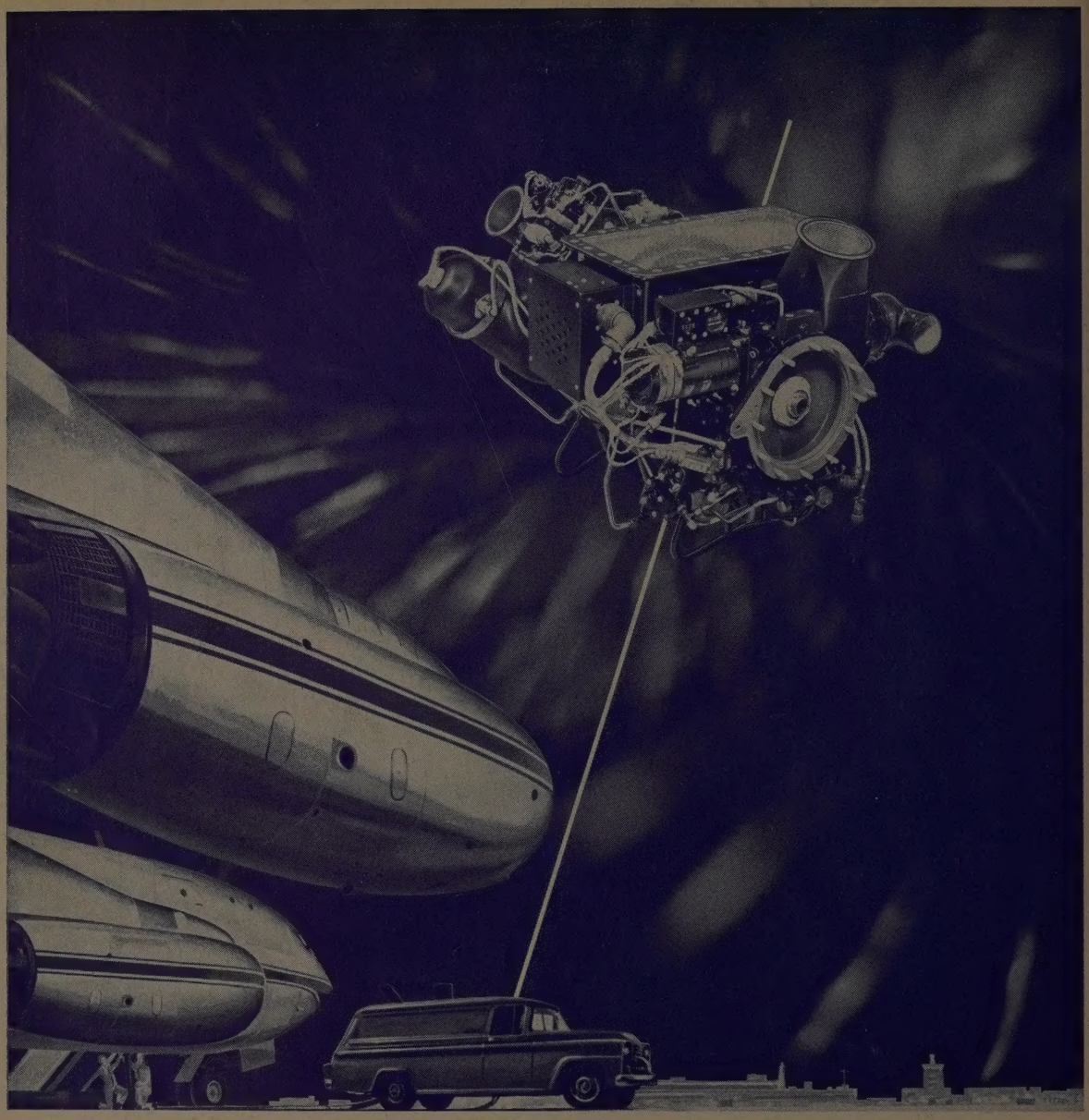
Throughout our territory there is visual proof of the growth of industry, as well as new commercial centers, new office buildings and new residential areas. New, modern, landscaped industrial establishments are seen in the Delaware Valley section, as well as in Central and Northeastern New Jersey. Shopping centers and housing developments have risen in many parts of the area served by Public Service. Urban renewal is taking place in many cities.

The years ahead hold great promise. All of these facts reflect the growth of New Jersey, and Public Service is growing along with this great state. We are planning and building ahead to meet all demands for our services.

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